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Seedlings of SEKEL PEAR, showing variations.

This Catalogue

is not for public distribution, if editors receive a copy it will give me much pleasure to have my work mentioned in a general way, or descriptions given of any or all the new creations, of course giving due credit; yet I would kindly request that this list be not mentioned as a whole as I should at once be overwhelmed with an avalanche of correspondence. And there are other considerations which will be fully understood by those who possess rare plants, which have cost more than money—priceless years of time.

I am constantly urged to write regarding the work, and nothing could give me more pleasure, as volumes could be written on the questions brought up by the wonderful display of life-forces in plants and the startling results obtained by cultivation, crossing, combination and selection; but I am obliged to defer that until some future time, as at present it seems much more important to produce results than to record them or theorize on them. The important steps are all recorded in my field-note books.



AERIAL POTATOES grown on Burbank Potato vine grafted on Ponderosa Tomato plant. Abundant crop of all sizes, shapes and colors. (See also page 52.)



(HYBRID NICOTIANA. See page 47.)

In Presenting You

this catalogue the opportunity occurs for stating that some of the best results of more than twenty years of an active life are portrayed in the pages following. The fruits and flowers here mentioned are the *best of millions* of cross-bred, hybrid and seedling plants, which are now and have been produced at the rate of a million or more a year. Many years must be spent in testing and segregating those which are to become familiar, well-known standards of excellence as so many new fruits and flowers, which have been produced on my grounds, are now known to be.

The time has arrived when purchasers of new and valuable novelties in fruits and flowers are aware that America as well as Europe may furnish some of them.

During the twenty years in which I have been actively engaged in this new work, which is wholly a private enterprise and the most extensive of its kind which exists or has ever existed in this or any other country, many new plants have been produced and introduced. Among the first which acquired a national reputation was the Burbank Potato, which originated in 1873; though now partly supplanted by newer varieties in the Eastern States, it is still the standard on the Pacific Coast, and has long helped to nourish the brain and

brown of presidents, authors, actors and laborers alike. Since that was produced many eyes have been brightened, many homes made more charming, and many markets and tables more tempting by the fruits and flowers which have been born on my experimental grounds, and there is not a land on this broad earth which has not in some measure been influenced by them.

A love for the work has always been the great incentive through the many years of study, with the added pleasure of knowing how rapidly many of my introductions are becoming popular, among which may be mentioned Sweet Botan, Burbank, Satsuma, and a dozen or more other Plums which are proving to be hardy and productive in northern New England and even at Ontario, Canada. The Sieboldi and Sieboldi cordiformis Walnuts, which have lately proved themselves able to endure a temperature of twenty-five degrees below zero without a trace of injury, the Japan Mammoth Chestnut, Accacia Molissima Florabunda and some of the best Gladiolus, Clematis, Lilies and Roses known, some introduced directly, and some by other firms. The Quinces which I offer are in all respects the greatest advance ever made in improving this fruit, combining the best of every good quality known in the Quince with size, beauty, tenderness and flavor never before attained.

The endless labor bestowed in hybridizing, selecting, testing, etc., is now being more generally recognized, and the fruits and flowers originated by my labors are becoming household words wherever fruits and flowers are admired.

The six hundred thousand hybrid and cross-bred seedling berry plants which I am growing and more than half a million hybrid seedling Lilies are producing profound surprise and admiration, and from the vast chaos of mingled species forms have been created and segregated which will produce great and unsuspected changes in fruit and flower culture.

When I mention, for instance, a Raspberry of largest size which ripens before Strawberries, before Raspberries bloom and before Blackberries show a leaf or bud, some idea may be formed of some of the tremendous changes which will be produced in berry culture. The *best*, after a most exhaustive and careful trial, will be introduced from time to time.

The above does not even outline the work which is being accomplished on my experimental grounds, only having mentioned two or three of many thousand horticultural acquisitions which only a few years ago were thought to be utterly impossible. I am often asked "Why not introduce them yourself?" My time is so wholly occupied in their production that I cannot well attend to their introduction. It is plainly impossible to produce, test and introduce so many of them as my grounds are annually turning out; therefore, I offer all the stock in existence carrying with it the complete control of each new creation at the extremely low prices quoted in this circular.

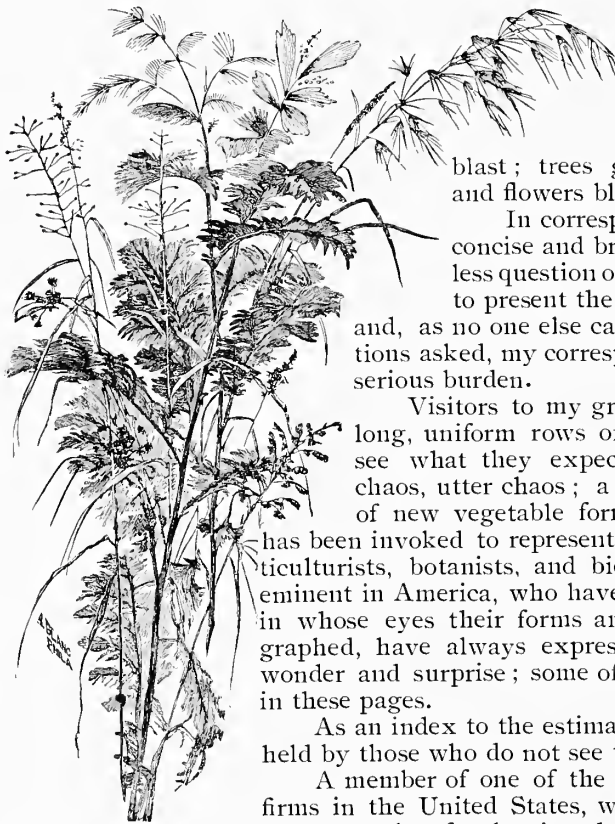
The sale of these novelties has generally been by correspondence, or more lately by members or agents of the larger firms visiting my grounds to select and purchase such as seemed to offer the greatest results for themselves and

their customers. The enormous amount of correspondence required by these plans has induced me to publish this circular, thus bringing these productions more distinctly before purchasers. This list is sent only to a few hundred prominent American and foreign firms. If the stock and exclusive control of any of these new plants, which will soon be recorded in the horticultural world as standards, is desired, it will be necessary to write early, as no doubt some of them will be sold before these circulars are all distributed.

The names of a large portion of all the prominent floral, seed, and nursery firms of the world have honored my order books for the past eighteen years; and when once recorded appear perennially ever afterwards; and it gives me great pleasure to see the familiar names reappear with each recurring season with larger orders and increasing confidence.

LUTHER BURBANK.

My Grounds are Not Open to the Public.



June is my reception month for intending purchasers. Nature may then be seen at her work, as everything is in full

blast; trees growing, berries ripening, and flowers blooming.

In corresponding please kindly be as concise and brief as possible; a thoughtless question often requires hours of study to present the true light to the inquirer; and, as no one else can answer the myriad questions asked, my correspondence is getting to be a serious burden.

Visitors to my grounds who expect to find long, uniform rows of beautiful plants will not see what they expect; but, instead, will see chaos, utter chaos; a workshop, the birthplace of new vegetable forms. The faithful camera has been invoked to represent a few of them; and horticulturists, botanists, and biologists, among the most eminent in America, who have walked among them, and in whose eyes their forms and colors have been photographed, have always expressed themselves in terms of wonder and surprise; some of them speak further along in these pages.

As an index to the estimation in which my work is held by those who do not see the inside:

A member of one of the largest nursery and floral firms in the United States, who had traveled over three thousand miles to see my grounds, after leaving the railroad station, overtook an old gentleman who had for years worked for me, and inquired of him

if he knew Burbank. He replied: "Course I do. He used to have a big nursery, but sold it out, and now he raises acres and acres of stuff, and every summer has 'em all dug up and burned. I wouldn't give a hundred and fifty dollars for the whole kerboodle." The gentleman from the Atlantic shore pigeon-holed the advice, but continued his way, and before the day passed had selected half a dozen plants, for which he paid six thousand dollars.

"Plant and seed novelties have always been and always will be high in price. This is necessarily so. Originators have never been adequately paid for their productions. The producer of a superior fruit, grain or vegetable should realize a fortune from its sale, for such productions are rare—the work generally of years of study and toil—and they are oftentimes worth millions to the public."—*Rural New Yorker*

"Fruit-growers throughout the world are indebted to you for your indomitable energy and perseverance in producing and introducing so many new and rare fruits. You will hand down to posterity an enviable name and reputation."

D. HAY & SON,
Montpellier Nurseries, Auckland, New Zealand.

"Burbank has the most wonderful collection of plants of new varieties in existence in America or Europe; he has made most marvelous improvements in Blackberries and Raspberries, and a vast number of Lilies, Roses, etc. He is doing a work no one has ever before attempted, and with wonderful results."

H. O. MEAD, in *Fitchburg Mail* (Mass.).

"Luther Burbank, the greatest horticultural experimenter in America, if not in the world."

A. CRAWFORD, Cuyahoga Falls, O.

"Luther Burbank is devoting his life and fortune to the improvement of fruits and ornamental plants by seedling cultivation."

E. S. CARMAN, in *Rural New Yorker*.

Burbank's Horticultural Experiments.

"EDITORS PRESS: When you requested me to give you some items regarding what the nurserymen of Sonoma county are doing I little thought what a task I was undertaking. When I struck the establishments of Luther Burbank at Santa Rosa and Sebastopol I found that I had a big job on my hands, and one entirely out of the regular line. I found there the largest and most varied horticultural experiment station on this earth, and I think I would be within the bounds of truth if I said it is as large and doing as much practical good work as all others of its kind on earth combined. This may seem a very wild expression, but we will see as we progress.

"Mr. Burbank began his experimental work in earnest when he was sixteen years of age in his native State of Massachusetts. His first marked success was the production of the now well-known Burbank seedling Potato from seed sixteen years ago, and introduced twelve years ago by Jas. J. H. Gregory of Marblehead, Mass., which to-day stands at the head of all Potatoes of its season. To widen his field of labor, and to find a climate in which he could grow anything he wished to without constant war with the elements, he came to California and established himself at Santa Rosa, where, like many others, he had a pretty hard struggle for the first few years; but, being a tireless worker, with great energy and skill, he forced a success, and Fortune was forced to nod her head to him. The commercial part of the nursery business was pushed with great energy and skill, and was soon a marked success. In the mean time his experiments in the line of producing new fruits, flowers and plants from seed by selection, hybridizing, and cross-pollination was receiving his constant care and producing wonderful results. Finding this business growing to a vast size on his hands and exactly suited to his tastes he sold out the commercial part of his nursery business.

"Mr. Burbank is now devoting his whole time to experimentation, and growing a stock of the novelties he has already produced. I can best give a correct idea of this immense establishment by telling what he has done and is doing. In the way of explanation, I will first say, he knows no such word as *cannot*. 'I can't' was never in his dictionary. I mean by this that he has never been bound by the supposed lines of hybridity; by the laws laid down in the books; that the books and former supposed facts of science say that hybrids cannot be obtained between this and that species is no rule or guide for him. *He tries*, and, strangely, many heretofore supposed impossibilities in the line of hybrids between distinct and very distantly related species are now facts, living organisms. In fact, Mr. Burbank is a breaker-up of species; he has proven that *all life* on this earth is akin; that

every form can be made to 'break,' no odds how seemingly obdurate it may seem, and when once 'broken,' it may be carried in any direction at will by time, skill and patience; that hybridity and new forms are the rule under skillful, right manipulation; and that new types may be permanently 'fixed' by the same patient work.

"When I wrote four years ago, after years of a very careful study and experiment with them, that I was convinced that the whole Almond family could be hybridized, the one with the other, I was laughed at and called a *crank* by our leading botanists. What would these men call Burbank? If they called him names he would lead them out into his garden and introduce them personally to just such hybrids, *thousands* of them growing as saucily and vigorously as if their forms dated back to the Garden of Eden, instead of being forms entirely new to the universe, only a month, year, or a few years old.

"In the production of new things Mr. Burbank has set his mark very high. His rule is, that he will not propagate for dissemination any new fruit or flower, tree or shrub unless it is the equal of the best of that form in every particular, and its superior in one or more points.

"In the following partial record of what he has done and is doing, no one but he who has done some work in the line can have any knowledge of the immense labor and skill involved. On the place we see seedlings growing by the thousand of the most difficult kinds to handle, and to give the right conditions in which to germinate the seed, etc.

"Mr. Burbank has during the past few years grown from selected seed, many of them from flowers pollenized by hand with pollen of other varieties of species, the following seedlings from which to select individuals for fruiting to obtain new varieties: * * * *

"I had rather be the originator of Burbank's best Raspberry than be President of the United States. To get at the exact size of this fruit we gathered of it, and all others in fruit in the same soil and culture at the time, just as we would for the market and weighed an ounce of each, and found the following numbers to weigh an ounce: Gregg, as grown here, 28; selected berries, as grown in Ohio by Mr. Albaugh, 15 reported; Hansell, 26; Soughegan, 23; Beebe's Golden, 20; Marlboro, 15; Davison's Thornless, 30; Golden Queen, 18; Brinkle's Orange, 18; Shaffer, 13; *Burbank's new Berry*, $8\frac{1}{2}$ to an ounce.

"The new one, a seedling of Shaffer's Colossal, is much brighter colored, very much finer in flavor, nearly double as large, and—well, to be safe, I will say only four times as productive as it or any other Raspberry. I think I would be safe in saying it will give six times the fruit of any other Raspberry, and safe in saying that one 'hill' or stool of plants will, in the course of a year, produce sixteen times the quantity of fruit of any other Raspberry not having the habit of fruiting in autumn and winter. This habit the new berry has in the greatest degree, not only giving an enormous crop of its immense berries at the usual time, but great masses of fruit through autumn and through winter, if mild.

"Dewberries. Here we again have a wonderful success, especially in the seedlings from the well-known Lucretia Dewberry, heretofore considered by far the best of all, but one could quickly see that it was quite small potatoes as here growing beside its lusty offspring in Mr. B.'s grounds. The new ones were much larger, finer flavored, and best of all, very much more productive, and healthier in foliage.

"Lilies. Here, again, we have wonders. Mr. Burbank has collected and bloomed every known *lilium* that can be induced to flower in this climate. He has found many of this species to hybridize freely. One of them, a native species of this State, seems to be fertile with nearly all other species and to produce strong seeds with their pollen. We may look for some startling new forms in Lilies. * * * *

"I shall make no comment on this vast work now going on in our midst. I have given it only in part; only the few can appreciate such an undertaking. Mr. Burbank is to-day carrying more than any one man should undertake, but Massachusetts men seldom break down in Sonoma County.

"I believe that I am the only man that has been taken into the inner temple of Mr. Burbank's labor. He doesn't want present notoriety. He *doesn't want visitors*; he has not one second to spare to them; he is the busiest man in the United States; he doesn't want correspondence except on strictly business and scientific matters; *he has nothing for sale*, or to offer for sale, except such things as may be found in his published list of novelties mailed free each autumn to all who wish it."—D. B. WEIR, in *Pacific Rural Press*.

"Luther Burbank was born on a farm in Lancaster, Worcester County, Mass., on March 7, 1849. He received a liberal education, and in the fall of 1875—when a little over twenty-six years old—moved to California and settled at Santa Rosa, in Sonoma County, sixty miles north of San Francisco. Having been from his early years a great lover of fruits and flowers, he bought a tract of land and started in the nursery business. He also began a series of experiments in horticulture, floriculture and pomology, and so deeply interested did he become in these that, about two years ago, he sold the commercial part of his business in order to be in a position to attend more closely to his cherished experiments. He still retains forty-two acres, mostly devoted to experimental purposes. Of this area, twelve acres of rich, black alluvial soil, sixteen feet deep, are situated in the town of Santa Rosa. Ten acres of sea-sand at Sebastopol, eight miles west of that place, give, he finds, the best

results in comparing and testing new plants. The rest of the land is a mixture of sand and clay—mostly sand—which he finds very suitable for testing fruits.

"After repeated experiments Mr. Burbank had almost concluded that the common garden Bean would not cross with the Lima; but at last success crowned his efforts, and he obtained a pod of four beans by fertilizing the old Horticultural Pole Bean with Lima pollen, though the form and color of the variety were not changed. When the cotyledons appeared, however, from one-third to two-thirds of the upper end of each of the Beans bore the markings characteristic of Lima Beans, while the lower parts had the peculiar markings of the Horticultural Pole. The edges of the divisions, like those of uncongenial grafts in trees, were rough and serrated. As the plants grew they were naturally watched with great interest. After a week or more the separation became complete, the upper or Lima parts dropping off, the plants bearing the usual form of Horticultural Poles. Among the curiosities in his grounds are white Beans which almost invariably produce black ones, and *vice versa*. From a cross of two varieties of average growth, some produced vines twenty feet or more in height; while others in the same lot were so dwarfed that all the pods had to grow horizontally, as otherwise they would have pierced the ground.

"Mr. Burbank writes us that the results of some of his experiments are as surprising to himself as they are likely to be to others; but just at present he is not in a position to make them known."—*Rural New Yorker*.

"The sketch only alludes to a few of Mr. Burbank's achievements; others have already been described in the *Rural*, and others will be as their results are attained. Mr. Burbank is fortunately a young man working amid the most favorable conditions of soil and climate, and full of ambition and strength. It is hard to set bounds to work thus favorably circumstanced. It is a matter which will be better understood a generation hence."—*Pacific Rural Press*.





Branch of HYBRID WALNUT.

Nut Trees.

Hybrid Walnut.

Juglans Californica × *Juglans Regia*.

THE first and one of the most interesting and valuable hybrids produced among Walnuts, surpassing all others in rapidity of growth, size of foliage and beauty of form. Budded trees six years of age under the same conditions are fully twice as large, broad and tall as Black Walnuts at ten, or Persian Walnuts at twenty years of age. Twelve to sixteen feet growth per year is not unusual, thus the hybrid grows twice as fast as the combined growth of both its parents. The leaves which are from two feet to a full yard in length are clean cut, glossy, bright green, have a surpassing sweet odor resembling that of fragrant Apples and as powerful and peculiar as that of Roses or Lilies.

The bark is thin, smooth, light gray with marblings of white; the wood is very compact, with lustrous silky grain, taking a beautiful polish, and as the annual layers of growth are an inch or more in thickness and the medullary rays prominent the effect is unique. This hybrid originated in 1888 from a cross made the year before; like many true hybrids, though blossoming freely every season, it has not borne fruit, therefore cannot be reproduced from seed, but is easily budded or grafted on thrifty young Black Walnuts. See cut on opposite page.

As an ornamental and timber tree it is peerless. Price on application for exclusive control of this variety.

"The foliage of your hybrid Nut between *Juglans regia* and *Californica* is remarkably large, shows great vigor and seems to fully substantiate all you have said about it."

H. E. VAN DEMAN,
Pomologist, U. S. Dept.
of Agriculture.

"You are certainly doing a great work in your hybridizing, and the wonder to me is that you accomplish so much in the midst of business cares."

(Prof.) L. H. BAILEY,
Cornell University, Ithaca,
New York.



HYBRID WALNUT. (Life Size.)
See also next page.



JUGLANS CALIFORNICA.
Staminate Parent.

JUGLANS NIGRA.
Pistillate Parent.
(See also page 9.)

HYBRID WALNUT.
All Life Size.

Hybrid Walnut.

Juglans Nigra × *Juglans Californica*.

Unlike the hybrid just mentioned this one produces nuts in abundance and of the largest size, as may be seen from the life-size photo-engravings; the quality also is very much superior to that of either parent; the meat, which is very large, and parts more readily from the shell, has none of the disagreeable strong taste of the common American Black Walnut and much more sweetness and character than the California Black Walnut.

In foliage, growth, and general appearance the characteristics of both parents are about equally combined in the hybrid. Bearing nuts when young and abundantly as it does, a promising new field is opened for producing still other variations.

Price on application for partial or exclusive control.

"Contrary to expectations I found the second invoice better than the first. I feel that I have received much more than my money's worth. How it does revive one's faith in poor human nature to meet, now and then, on the great highway of life a man who does not take advantage and is honest and square in action and word."

A. P. ROACHE,
Watsonville, Cal.

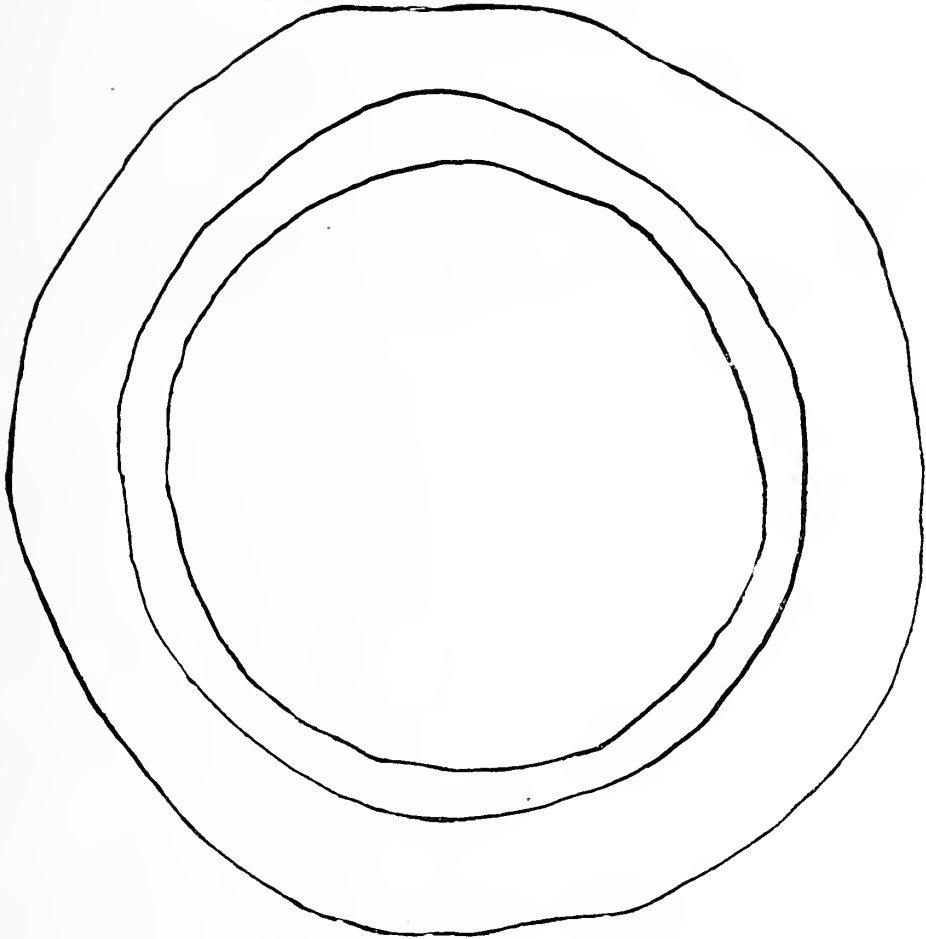
New Japan Mammoth Chestnut.

S.—8940.*

The common Japan Mammoth Chestnut has proved to be hardy over a large portion of the United States, and the nuts of the true Mammoth variety average about half a dozen times larger than the average American Chestnut. For many years I grew and fruited seedlings by the thousand for the purpose of producing a better variety. The variations in the size and quality of the nuts, and the productiveness and early bearing of the trees, were remarkable. In one case a burr containing three good-sized, well-filled and well-ripened nuts was produced by a tree in October, which had been grown from a nut planted in April the year before; thus ripe chestnuts were produced from a nut planted only eighteen months before. I now offer the best one of more than ten thousand seedlings, a tree which each season bears all it can hold of fat, glossy nuts of the very largest size and as sweet as the American Chestnut.

Stock on hand: one large tree. Price for stock and exclusive control, \$300.

*The names and numbers under which some of these plants are described are temporary.



Outlines of the first, second and third crops of VAN DEMAN QUINCE.

Quinces.

New Quince.

“Van Deman.”

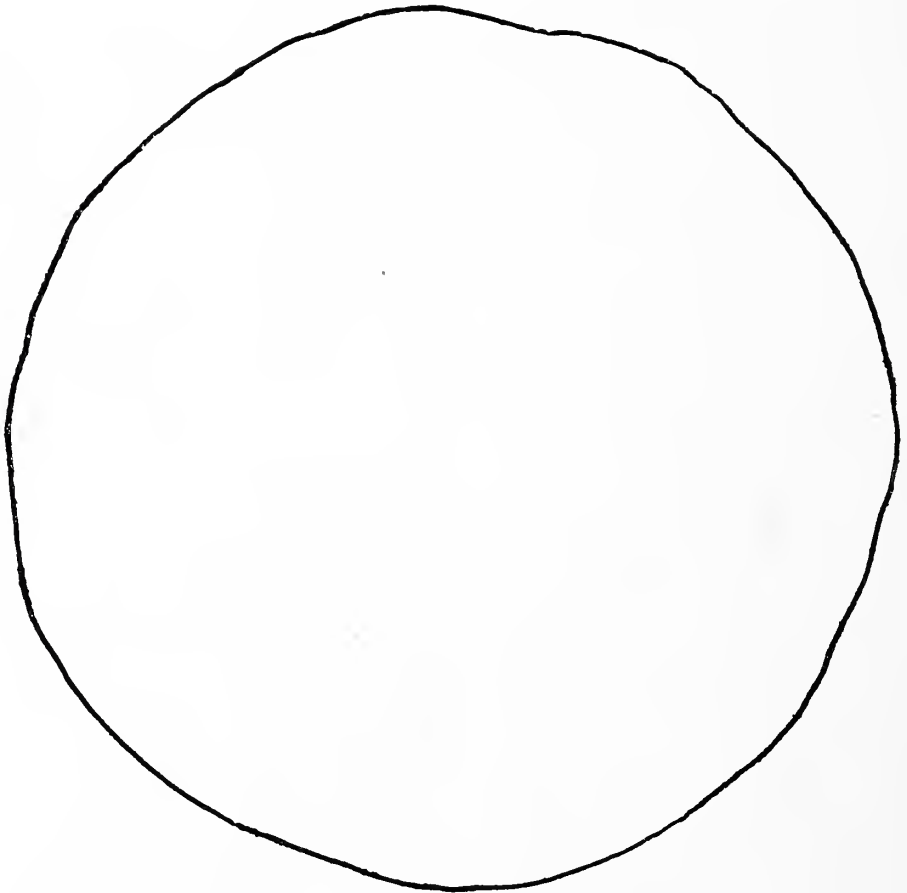
THIS, among others of my seedlings, received the Wilder Medal at the meeting of the American Pomological Society at Washington, D. C., in October, 1891, and was so generally admired, and has proved to be so valuable, that Prof. H. E. Van Deman has consented to allow me to name it for him. I sincerely hope it will prove to be as valuable and as useful as a fruit as Prof. Van Deman has proved himself to be in his position as Pomologist. If so, I shall be satisfied; for I know of no one who is doing more valuable, efficient and faithful work than the chief of the Pomological Division of the Department of Agriculture.

The Portugal Quince has always been considered the best flavored and most tender of all known quinces, but a shy bearer. The Van Deman, which is a seedling of the Portugal, is not a shy bearer, but will, without doubt, produce more big, fine-flavored golden fruit than any other.

The outlines show the forms and sizes of the *three crops*. The first or main crop is represented by the outside line, and ripens here September 20th to 25th, two weeks or more before Orange and Meech's Prolific, and often weighing, even when grown on small trees, from twenty-five to twenty-six ounces each. The middle line represents the second crop, which ripens November 1st, and the inside line the third crop, which ripens December 1st. All are of the most superior flavor, texture and quality for all the purposes for which quinces are used, and in addition are as tender and good as apples when *baked*, and bake as quickly too, and, when *dried* or *canned*, retain all the Quince flavor so much admired. This opens a new field, as the demand for these new Quinces, when dried or canned, will increase rapidly as they become known.

I have growing on my grounds for comparison trees of Angers, Orange, Pear, Reas' Mammoth, Meech's Prolific, Champion, West's Mammoth and others, and not one of them has ever borne any fruit comparable with the Van Deman in size, quality or beauty.

Stock on hand: Original tree, some five hundred six-foot grafted trees, and about twenty thousand cuttings. Price, \$800.



Outline of average "Santa Rosa" Quince.

New Quince.

"Santa Rosa."

This Quince is remarkable for its great size, exquisite beauty of form, polished light lemon yellow, almost white skin, productiveness, tenderness of flesh, delicious flavor and diminutive core. It is a seedling of Reas' Mammoth, and, like it, ripens in September. The fruit is so fine-grained and tender, and free from the harsh acid of the old Quinces, that it is as good as some popular Apples for eating raw, and fully equal to the best of Apples or Pears when baked, stewed or canned, and makes a superior light-colored dried fruit. The fruit of the "Santa Rosa" will cook tender in five minutes.

The tree is unusually vigorous, and resembles Reas' Mammoth in form and growth, but, unlike it, grows readily from cuttings.

Stock on hand: Original tree, fifty grafted trees, bearing size, and about one thousand rooted cuttings. Price, \$800.

An Important Improvement.

"Heretofore the Quince has been considered unfit for use until it has passed under the hand of the good housewife. But Mr. Luther Burbank of Santa Rosa, California, who has spent nearly a lifetime in crossing and hybridizing fruits, flowers, etc., has produced some choice varieties altogether in advance of the older sorts. Two of these are said to be without the usual downy covering, and so tender and agreeable that they can be eaten out of hand like a fine apple. This is one of the most important improvements among fruits in modern times.

"The principle of variation implanted in the constitution of fruits generally, and to which we are indebted for all the finest cultivated varieties, seems less pronounced in the Quince than in most others. This has doubtless been discouraging to persons inclined to experiment by planting the seeds in order to produce new sorts, and, as a consequence, there are but few varieties of the Quince."—*New York Examiner*.

"Bronze medals were given to Luther Burbank of Santa Rosa, Cal., for a magnificent collection of seedling Quinces, which could not well be surpassed in size, form, uniform smoothness, color or general appearance."—*Rural New Yorker's* report of the meeting of the American Pomological Society at Washington, D. C.

In the annual report of the Chief of the Division of Pomology, United States Department of Agriculture of 1891, the following description of two of my Quinces is given. As the fruit lists are now so large, the Division of Pomology is very careful not to recommend anything unless thoroughly worthy, and in any case their judgment is without bias:

VAN DEMAN.—"Oval truncate; size, large; greenish yellow; flavor, subacid, mild; quality, best. This variety is one of the very best in every respect that I have ever examined, and the tree is reported as exceedingly thrifty and productive. After several years' trial, Mr. Burbank considers it the best of his hundreds of new seedlings, and has named it as above."

SANTA ROSA.—"Another very choice new Quince. It is very highly colored, and has the peculiar Quince flavor strongly developed, and yet can be eaten raw like an Apple. Free from fuzziness."

"Concerning the Quinces you sent for the meeting of the American Pomological Society, you no doubt have heard of the attention they attracted and the admiration expressed both by the visitors and by the Committee on Awards. The Rubus leaves puzzled everyone, and were a revelation to many who were unaware that so much had been accomplished."

W. A. TAYLOR,
Assistant Pomologist U. S. Department of Agriculture.

"I think these are the two best Quinces I have ever had the pleasure of examining, and feel sure that they will meet with high commendations when generally tested."

H. E. VAN DEMAN,
Pomologist, U. S. Department of Agriculture.

New Japan Quince.

“Alpha.”

Pyrus Maulei and *Pyrus Maulei superba* have been recommended as the best of the Japan Quinces for fruit.

From many thousand seedlings one has been obtained which produces large, handsome, light, crimson blossoms, and extremely large, orange-like, waxy, yellow fruits in the greatest profusion. It is one of the handsomest of all fruits, and always attracts attention by its large size, peculiar form, golden color and exquisite fragrance.

The quality is much superior to other Japan Quinces, and will be found useful everywhere—North, South, East and West—owing to its hardy vigor, productiveness and value for jelly-making. Stock: One large original bush. Price, \$300.

New Flowering Quince.

“Dazzle.”

Flowers of the most dazzling crimson, *over two inches in diameter*, of unusual substance, and growing in great clusters. The plant has a fine gracefully drooping habit and vigorous growth. Stock: One very large bush. Price, \$300.

Plums and Prunes.

Cross-bred Prune.

A. P.—90.

Petite d'Agen × *Hungarian*.

THE *Petite d'Agen*, French Prune, or California Prune as it is often called, is well known to be the most important fruit grown in California. During the spring of 1885 the *Petite d'Agen* was selected as the parent tree, and many thousand blossoms were pollinated from the Hungarian Prune, the largest, handsomest and most productive Prune then known.

At the meeting of the California State Horticultural Society in August, 1888, I had the pleasure of exhibiting seventy varieties of the best of these cross-bred seedlings. The purchaser of the commercial part of my nurseries, being ignorant of their value, destroyed some sixty or more of them, but several of the most promising had been grafted into another tree, and among them the subject of this sketch, which seems to be a very well-balanced cross between the two Prunes. The fruit, which averages one and one-half to two ounces each, is sweeter and of finer texture than the Hungarian Prune, and larger (possibly the largest Prune or Plum known); but not as firm and sugary as the *Petite d'Agen*. It is well distributed along the sturdy branches, so that the immense load is carried without danger of breaking the trees. Its handsome

appearance, unequaled size and rare keeping qualities will, without doubt, place it at once among or above the best market and shipping prunes.

Stock on hand: Eight bearing trees and numerous grafts. Price for stock and control, \$1,500.

"The California State Horticultural Society met Friday, August 31st, at the rooms of the State Board of Horticulture. The meeting was rendered specially interesting by exhibits of Prune seedlings by Luther Burbank. There were seedlings of the French Prune of which he has ripened over seventy this year. There was an almost infinite variety in form, size and color—golden, yellow, almost to black; size from a pigeon's egg to a large hen's egg; various oblong forms to nearly round. The secretary said he had kept the samples in a close box for about three weeks, and evidently some of the seedlings had fine keeping qualities."—*Pacific Rural Press*.

Also described in Prof. E. J. Wickson's "California Fruits, and How to Grow Them," the accepted authority, and the best, most thoroughly practical, complete and exact work published, and one which every fruit-grower should have.

"The cross between Pond's seedling and Petite I find a beautiful Prune of excellent flavor and should be profitable for shipping. I shall be pleased if, when you have trees to dispose of, you would put me on your list of those to be notified, as I shall want some of them.

A. T. HATCH,

"Flood Building, San Francisco, California."

(Probably the largest fruit-grower on earth.)



PETITE PRUNE.

CROSS-BRED PRUNE A. P.—318.

Cross-bred Prune.

A. P.—318.

Another magnificent Prune raised from a seed of the Prune d'Agen: pollen of Hungarian Prune. The trees are perfection in growth and productiveness, and though having somewhat the general appearance of the Petite d'Agen yet the branches are more sturdy, and with very little pruning naturally assume a uniform appearance much superior to either parent.

The form, size, and general appearance of the fruit is well shown in the accompanying photograph; the color is like Petite d'Agen, and it has the same firm, rich, sugary flesh, ripens a full week earlier, and being three or four times larger and a perfect natural *freestone* will perhaps supplant that grand, long known, and extensively grown variety, and change the whole Prune industry of the world. As a combined drying, shipping, market and table variety it has no rival.

Stock on hand: Three large trees, ten small ones, and numerous grafts. Price of all stock and control, \$3,000; half of stock and half control, \$2,000.

"We write to express our great satisfaction at the Burbank Plum, which we have now tested. It is a most delicious flavor, partaking of the Nectarine and Apricot, and we say, without hesitation, the best of all these valuable Plums. With us the fruit is like a handsome, highly colored Nectarine.

"In conclusion, we express most sincere thanks for the many valuable things that you have sent, and for their reliable character. Everything from you we can depend upon. We have found your opinion about fruits to be genuine, and a long way superior to any other person or firm which we have had the pleasure of dealing or corresponding with."

D. HAY & SON, Auckland, New Zealand.

"Three years ago last February we got Burbank Plum grafts from you. To-day there are Plums on the trees that measure six inches in circumference; they are just beginning to color, so will grow some yet. Not one has ever been touched by the curculio. In short, they seem to be perfect Plums in every particular.

"We write all this just to express our appreciation of what you are doing for horticulture."

A. M. RAMSEY & SON, Mahomet, Texas.



PURPLE-LEAVED HYBRID PLUM K. P.—193.

Purple-leaved Hybrid Plum.

K. P.—193.

This might be called the "Purple Leaved Kelsey," as it was grown from a Kelsey seed, but the wood, bark, leaves, flowers and fruit all show the most unmistakable marks of Pissardi.

The photograph shows the form and size of the fruit, which ripens after its purple-leaved parent and several weeks before Kelsey; it is dark purple with numerous white dots and a thin blue bloom; flesh reddish purple throughout; firm, subacid, good; much larger and better than Pissardi, but not as good as Kelsey, and the trees are not as productive. Its great value lies in its large purple leaves, which hold their color all summer, and its handsome wine-glass form. Being a much better grower and handsomer in form, and producing much larger, finer fruit than its purple-leaved parent, it will, no doubt, prove to be a very acceptable addition to lawns and parks as well as orchards.

Stock: Four large trees; price, \$300.

"There is no doubt about the leaves of this seedling resembling those of Pissardi, and the fruit seems to resemble it considerably, although of very much better quality."

H. E. VAN DEMAN, Pomologist, U. S. Dept. of Agriculture.

"Your valued favor was read with much interest, especially in regard to the new seedling varieties of Japanese Plums, which we shall certainly order as soon as offered. Burbank is excellent in every respect, and Satsuma was a wonderful sight when ripe. We had fully one hundred bushels of the various varieties, and can therefore speak as to their value."

P. J. BERCKMANS, Augusta, Ga.



"ROBINSON" PLUM.

HYBRID PLUM "GOLDEN." (Both Life Size.)

Hybrid Plum. "Golden."

Robinson Chickasaw × *Sweet Botan Japan*.

One of the most remarkable hybrid fruits ever produced; raised from a seed of the Robinson, yet is four times larger, and combines the delicious juicy sweetness of the Sweet Botan and the form and colorings of the Robinson. It ripens along through five or six weeks, and if picked before ripe will ripen and color up perfectly, and will keep sound a week or two when fully ripe.

The cut which shows the comparative sizes of Golden and Robinson also shows the form of the hybrid. The color is clear, semi-transparent, light golden yellow, which, later is nearly overspread with a hazy carmine blush, making it probably the handsomest Plum in existence. I have never seen a Plum tree which perfects so much fruit, and has it so evenly distributed as this one.

The branches, blossoms, and leaves somewhat resemble the Robinson on a larger scale, but the growth is as strong and more like the Japanese varieties. Should be hardy throughout most of the United States.

Stock on hand: One original tree, twelve small ones, and some grafts in old trees. Price for stock and control, \$3,000.

IMPROVED PLUMS.—"Under date of August 27th we have again from Mr. Luther Burbank some more specimens of a newly improved Plum which he calls 'Golden.' Mr. Burbank states that it was raised by a cross of the Miuer with the Japan variety known as Sweet Botan. The Miuer weighs half an ounce, while the new variety weighs two ounces. It is one of the most beautiful Plums that we have ever seen, looking far more like an old-time Nectarine than a Plum. Mr. Burbank deserves great credit for the successful energy he is pursuing in improving this class of fruit."—*Meehan's Monthly*.

"The Plums came in perfect condition. They are a great surprise in shape, color and flavor. We never saw a more beautiful Plum. We congratulate you on this great success.

ELLWANGER & BARRY, Rochester, New York.

"The fruit received in fine condition, and in quality all that could be desired. If its productiveness equals the quality it must be a great acquisition to the list of Plums."

S. D. WILLARD, Geneva, N. Y.

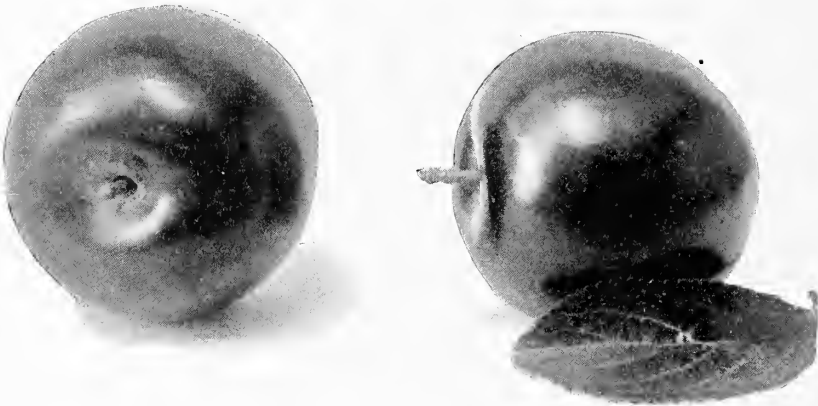
"The two samples of 'Golden' Plum and the specimen leaves from your various hybrids were duly received.

The 'Golden' is certainly a promising Plum, and this evidence of its long season of ripening adds to its value, as it will not have to be marketed all at once."

W. A. TAYLOR, Acting Pomologist, U. S. Dept. of Agriculture.

"The Plums came to-day firm and good. We are more than ever interested in your work, and congratulate you on your success.

CHAS. A. GREEN, Rochester, New York.



CROSS-BRED JAPAN PLUM "DELAWARE." (Life Size.)

Cross-bred Japan Plum.

"Delaware."

Everybody appreciates the wonderful combination of flavors so charmingly put up, combining as it does in its rich, purplish, wine-colored flesh and abundant juices the flavors of apricot, plum, grape, nectarine and watermelon, and some other new and undefinable ones. The size and shape of the fruit is well shown in the cut; color dark purplish bronze with a white bloom. *Par excellence* the fruit for home use. The trees are semi-dwarf, and productive almost to a fault. The fruit is larger and finer when grown by top-grafting into large Peach or Plum trees. Ripens here first of August. Seedling of Satsuma crossed with Kelsey.

Stock on hand: One small tree and a few grafts. Price, \$500.

"Prof. L. H. Bailey in speaking recently of the Japan Plums as a class said, 'I consider this the most important type of fruit which has been introduced within the past twenty-five years.'"

"The Burbank is so fine that we have faith in anything you recommend."

A. M. RAMSEY & SON,
Mahomet, Texas.

Seedling Japan Plum.

"Shipper."

Remarkable for its firm flesh and superior shipping qualities. Fruit, oval, light red with a white bloom; firm and sweet and yet juicy. The tree is a sturdy, handsome, upright but moderate grower and requires very little attention. The fruit can be handled like Apples, and will keep a long time. Seedling of Satsuma.

Stock on hand: One small tree. Price for stock and control, \$500.

"I am glad to know that you are so wide awake as to the necessity of being sure that we *know* that a Plum is Japanese or not. You have rare advantages for testing so many kinds of fruit from that interesting country."

H. E. VAN DEMAN, Pomologist, U. S. Dept. of Agriculture.



CROSS-BRED PLUM J.—3972. (Life Size.)

Cross-bred Plum.

J.—3972.

Kelsey × *Satsuma*.

A remarkably handsome, large, yellow Plum, marbled with green and having a red cheek; closely resembling a very large Reine Claude; light yellow, very sweet, and abundantly juicy flesh.

The tree is an unusually strong growing variety, with light green bark and broad shining leaves, and is as productive as any one could wish. The fruit grows so thick as to hide the older branches, and yet it all comes to perfection. Some of the branches show a slight tendency to be thorny.

Stock: Original tree and several strong grafts. Price, \$300.

Luther Burbank's New Plums.

"Notable results are already accruing from the wonderfully extensive and devoted efforts which have been put forth for many years by Luther Burbank of Santa Rosa. He has produced during the last twenty-five years something like twenty million hybrid and cross-bred seedling plants, and the endless labor and outlay bestowed in hybridizing, selecting, testing, etc., is now being more generally recognized, and some of the fruits and flowers originated by his labors are becoming household words wherever fruits and flowers are admired. We have from time to time alluded to this important work in the *Rural*, and we are pleased now to mention three new Plums of which early borne samples are sent us.

"The first is a seedling grown from seed of Kelsey Japan Plum crossed with pollen from Satsuma. It is a wonderfully fine fruit in texture of skin and flesh, and in fact is free from coarseness of any kind. It carries the rich dark color of the Satsuma, and in its upper portions shows the symmetry of that variety. Its lower half discloses the influence of the Kelsey upon its outline, for it has inclination to draw to a point, though to a much less degree than in the Kelsey. The flesh has the dark red of the Satsuma, somewhat lightened with the yellow of the Kelsey. Its flavor is characteristic and delightful, and suggests Watermelon, Grape, Plum and Apricot as its presence invades the palate. The pit is smooth, shapely and of medium size. The fruit seems to us to reflect in a notable degree the good qualities of both its parents.

"Mr. Burbank sends us also two other cross-bred seedlings. One, designated as 'J,' is a very handsome yellow with slight reddish clouding on the sun side. It is also built upon the Kelsey crossed in this case with the Burbank. It has rather more of the Kelsey shape than the fruit cross with Satsuma above described, but it is not nearly so uneven as the Kelsey. It has clear yellow flesh and a flood of juice of very mild, agreeable flavor. It seems to be a persistent clingstone.

"Another new variety is marked '2,' and is a cross of Kelsey with Satsuma pollen. It gives no intimation of the Kelsey shape, but almost fully reflects the Satsuma form. It is a dark color, plentifully studded with light yellow dots. It has a most beautiful deep red and almost translucent flesh, suggesting a mass of currant jelly. It is juicy, and has a distinctly vinous flavor. The variety has points which will command wide attention.

"These fruits are all good medium size, but smaller than good samples of either of their parent varieties. It is altogether probable that they will run larger when better grown. Mr. Burbank, of course, fruits his seedlings in close rows first to determine which are worthy of further trial, and these specimens came from plants grown almost as thick as a hedgerow. We shall watch with interest to see what they will do when budded into a good stock as Mr. Burbank will undoubtedly proceed to do.

"The production of a few such varieties as the above should prove full consolation and reward for the labor Mr. Burbank puts forth. Of course, to get one such fruiting variety he has to fruit hundreds, all the rest of which are probably altogether worthless through reversion to the wild type. But this is the price which the devoted originator of new varieties has to pay for his victories."—*Pacific Rural Press*.

"The Plums arrived in excellent condition. We think very highly of them."

THOMAS MEEHAN & SONS,
Philadelphia, Penn.

Hybrid Plum.

"Juicy."

This Plum, like "Golden," is a seedling of Robinson (Chickasaw) and Botan (Japan), and has been well tested three years. The tree would perhaps resemble the Robinson the most in wood and leaves but for its very strong rapid growth; in this respect surpassing either parent, and rarely equaled by any Plum tree.

The fruit is about three times larger than the Robinson, and nearly as large as the Botan, of the same shape, but of a light yellow color; very juicy and having the delicious sweetness of the Botan mingled with the acid of the Robinson.

Stock on hand: Original tree, one large tree grafted from it, and several small ones. Price, \$500.

"The other Plum is undoubtedly one of the very best in quality of its class. Its color is now perfect, and much resembles the 'Wild Goose.'"

H. E. VAN DEMAN, Pomologist, U. S. Dept. of Agriculture.

"The Burbank Plum is now ripe (January 20th). We grow them larger than you describe. We measured an average fruit and found it seven inches by six and three-fourths, and splendid flavor; and consider it the best Plum in cultivation. You deserve universal thanks for what you have done in raising so many valuable new fruits."

D. HAY & SON, Montpelier Nurseries, Auckland, New Zealand.



CROSS-BRED PLUM "PERFECTION." (Life Size.)

Cross-bred Plum.

"Perfection."

Kelsey × *Burbank*.

Among the many thousand Japan Plums which I have fruited, this one, so far, stands preëminent in its rare combination of good qualities.

The tree grows in vase form, sturdy and upright, yet as gracefully branching as could be desired, and is productive almost to a fault. The fruit, which is well shown in the photo-engraving, is evenly distributed all over the tree, and from the time it is half grown until a few days before ripening is of a pearly white color, but all at once soft pink shadings creep over it, and in a few days it has changed to a glowing carmine with a heavy white bloom; the stone is very small and the flesh is of fine texture, firm, sugary and delicious, and will keep two weeks or more after ripening, or can be picked when hard and white and will color and ripen almost as well as if left on the tree.

Stock on hand: Original tree, six good-sized young trees and fifty grafts. Price, for stock and control, \$2,000.

HYBRID PLUMS.—"Mr. Luther Burbank, of Santa Rosa, Cal., sends specimeus of Hybrid Plums, which are certainly remarkable in this—that they came in a small box by mail during the torrid weather of the early part of August, wrapped simply in cotton batting, and were as sound and fresh as if just taken from the tree. Certainly they are, in the language of the markets, admirable carriers.

"They are cross-bred Japan Plums. Though the first year of bearing, and therefore smaller than they will be next year, according to usual experience, they are six inches in circumference. One of them looks just like a very large Reine Claude de Bavay—the finest of all the green gages. The other is a dark purple, and of a piquant, agreeable flavor peculiarly its own. Another, the 'Perfection,' is superior to most of the Plums of the old world stock, both in size and flavor."—*Mechan's Monthly*.

"Specimen of 'Perfection' Plum duly received. I have had them modeled, and have good descriptions now made of them. This is certainly a handsome Plum, and of good quality, also."

W. A. TAYLOR, Asst. Pomologist, U. S. Dept. of Agriculture.

"Your new cross-bred Plums, 'Perfection,' were received in as good order as if fresh picked from the tree. I can only say it is excellent, and would seem to be the best of all with Japanese blood.

S. D. WILLARD, Geneva, N. Y.

Hybrid Plum.

A.—248.

Botan × *Robinson*.

One of the earliest Plums, ripening here early in July. The fruit, which in a hedgerow of seedlings averages three and three-fourths by four and a half inches in circumference, is oval, heart-shaped, dark crimson, and nearly covered with light yellow dots. Flesh, yellow, juicy with a combination of the flavors of both species.

In foliage, growth and general appearance of the tree, and in color and dotting of the fruit the Robinson is very prominent, but the fruit more resembles the Botan in form, size flavor and time of ripening, being some four weeks earlier than Robinson.

Stock: Original tree and some strong bearing grafts. Price, \$400.

"All of the Plums of which you have sent us samples are certainly remarkably fine. I am well acquainted with your history and your life-work, as are many others, and I realize the fact farther that to very few parties who have brought out, as you have, so many new and valuable varieties is given just compensation for their work. I would here add the Plums sent out by you under the name of Burbank as well as the true Sweet Botau are a remarkable success on my grounds."

S. D. WILLIARD, Geneva, New York.

"Your Plums reached us in first-class condition. They are splendid specimens of an improved race. You deserve great credit for the successful energy displayed in these useful lines."

THOMAS MEEHAN & SONS, Germantown, Penn.

"I think I never ate a better Plum in quality than the round yellow one that you say is a seedling of the Peach Plum."

H. E. VAN DEMAN, Pomologist.

Hybrid and Cross-bred Berries.

EVERYBODY appreciates delicious berries, but probably not one person in each million has the faintest idea of the labor and expense of crossing, raising and testing *a million new kinds of berries* as the writer has done, and selecting with untiring diligence those which are to become standards of excellence as the years roll by.

Nothing like the work which I am doing has anywhere ever been attempted even by Government aid; and no one will question the claim that I have made more and greater improvements in Blackberries and Raspberries during the last fourteen years than have otherwise been made during all the past eighteen centuries.

A list of some of the *species* which have been incorporated to produce these hybrids is given below; the combinations are endless; the results are startling and as surprising to myself as they will be to others when known.

| | | |
|----------------------|---------------------|----------------------|
| Rubus Articus, | Rubus idæus, | Rubus pedatus, |
| Rubus Australis, | Rubus incisus, | Rubus phœnicolasius, |
| Rubus Balfourianus, | Rubus laciniatus, | Rubus rosæfolius, |
| Rubus biflorus, | Rubus leucodermis, | Rubus spectabilis, |
| Rubus canadensis, | Rubus leucostachys, | Rubus strigosus, |
| Rubus capensis, | Rubus Macrari, | Rubus suberectus, |
| Rubus crategifolius, | Rubus Menziezi, | Rubus thyrsoides, |
| Rubus cuneifolius, | Rubus neglectus, | Rubus triflorus, |
| Rubus dalibarda, | Rubus nutkanus, | Rubus trivialis, |
| Rubus deliciosus, | Rubus occidentalis, | Rubus villosus, |
| Rubus flavus, | Rubus odoratus, | Rubus vitifolius, |
| Rubus fruticosus, | Rubus palmata, | Rubus sp. Himalayas. |
| | Rubus parvifolius, | |

Hybridizing Distinct Species.

"Mr. Luther Burbank sent recently a large series of photographs of the leaves of different individuals—hybrids between different species, Blackberries, Dewberries and Raspberries. It is a remarkable variation. Some have leaves as finely divided as ferns; others are palmate, like the Horse Chestnut; others have but a single leaf. It would puzzle the scientific botanist to know how to distinguish a variety from a species.

"Mr. Burbank is doing an excellent work, not only in the line of scientific botany but also for the practical fruit-grower."—*Meehan's Monthly*.

Japanese Golden Mayberry.

Improved Rubus Palmatus.

The earliest Raspberry ever known. The berries are of a golden straw color, as large as Cuthbert, and ripen here in April, *a month before Hansell*, before Strawberries, and before the earliest of the standard Raspberries of the past have hardly awakened from their winter rest. The bushes are distinct from all others, growing like trees six to eight feet high, with spreading tops, and all along the branches large, white, bell-shaped blossoms are pendant, which are soon followed by the great, sweet, glossy, golden, semi-translucent berries.

The plants do not bear as heavy when very young as some others, but, when well established, will surprise one with their abundance of fruit.

The history of this variety is as follows: Some ten years ago I requested my collector in Japan to hunt up the best wild Raspberries, Blackberries and Strawberries that could be found. Several curious species were received the next season, and among them a red and also a dingy yellow unproductive variety of *Rubus palmatus* (described by botanists and collectors as being unproductive and having an insignificant berry). One of these plants, though bearing only a few of the most worthless, tasteless, dingy yellow berries I have ever seen, was selected solely on account of its unusual earliness, to cross with Cuthbert

and other well-known Raspberries. Among the seedlings raised from this plant was this one, and, though no signs of the Cuthbert appears, yet it can hardly be doubted that Cuthbert pollen has affected some of the wonderful improvements to be seen in this new variety. Stock on hand: Six very large clusters and forty-eight strong young suckers. Price, \$800.

"It is quite remarkable that the small-fruited Japanese species, *Rubus palmatus*, should produce a variety so large as the one you sent, and it seems also to be remarkably early."

H. E. VAN DEMAN,

Pomologist, U. S. Department of Agriculture.

"In quality these berries are excellent, the flavor being sweet, without any unpleasant acid, and the seeds are very small and tender. It holds its color better than any other yellow Raspberry that I have seen. How is it in regard to productiveness?"

W. A. TAYLOR,

Assistant Pomologist, U. S. Department of Agriculture.



HYBRID BERRY. "PRIMUS."

Hybrid Berry.

"Primus."

Rubus ursinus (Western Dewberry) X *Rubus crataegifolius* (Siberian Raspberry). This was one of my first successes in Raspberry-Blackberry hybrids, and has been fully tested here for several seasons; it is one of the most productive berries known, and is larger and more regular in size and shape than the standard varieties heretofore grown. The flavor is unique; nothing like it has ever before appeared; all pronounce it superior when cooked, and most

people like it raw, while some claim it is the "best berry they ever tasted." It cannot be expected to be as sugary as those which ripen in warm weather, but above all is its earliness, for it *ripens* its main crop with Strawberries, and long before most of the standard, well-known kinds of Raspberries and Blackberries commence to *bloom*, and also bears more or less berries all summer. It will probably be classed as a Blackberry, as it is of a dark Mulberry-black color when ripe. The plant is a wonder for health and vigor.

Stock on hand: One original bush (very large) four large plants, twenty-one strong medium-sized ones. Price, \$600.

Hybridizing the Raspberry and Blackberry.

"It is only a short time since it was supposed to be possible to cross the Raspberry with the Blackberry; and ever since Luther Burbank, of California, had, in 1883, succeeded in crossing the Red Antwerp Raspberry with the Pacific Coast Dewberry (*Rubus ursinus*) it has often been stated that no practical results had been obtained.

"The middle figure in the cut on opposite page shows a leaf and some fruit of one of Mr. Burbank's later hybrids which bears large and perfect fruit in the greatest abundance, ripening in California with the earliest Strawberries, and before our well-known standard Raspberries and Blackberries are in bloom.

"A leaf and fruit of the California Dewberry (the pistillate parent) is shown at the left; and the staminate parent, the Siberian Raspberry (*Rubus crataegifolius*), at the right. All are about one-third natural size. Curiously all the other seedlings from the same cross, though varying greatly in foliage and growth between the two parents, were barren, though most of them bloomed abundantly, the blossoms of many appearing to be perfect.

"It is also remarkable that the hybrid should ripen its fruit several weeks before either of its parents, and to excel them much in productiveness and size of fruit, though retaining the general appearance and combined flavors of both. The blossoms are large and handsome, and are followed in an incredibly short time with the large, glossy black fruit."—*Meehan's Monthly*.

The contents of your letter are of exceedingly great interest to me, and I trust we may be able to keep track of the important work which you are doing. This one new hybrid which you have originated between the wild Dewberry of your State and the Siberian Raspberry may prove to be a great blessing to horticulture, and no doubt you have other things of equal value; but, as you have been doing, you will have to work, watch and wait."

H. E. VAN DEMAN, Pomologist, U. S. Dept. of Agriculture.

"Although your new berry is a hybrid, I presume we will properly call it a Blackberry. It is certainly remarkable that a cross between two distinct species, one a Blackberry and the other a Raspberry, should prove by its seedlings to be of such "pure blood." It should be named in your honor, or at least according to your ideas. The quality of the fruit seems to be very good, although we can hardly judge of it properly from the rather wilted specimens which we have received here. This, of course, is an important point, and you have ample opportunity to judge of it in this respect."

H. E. VAN DEMAN, Pomologist, U. S. Dept. of Agriculture.



Hybrid Berry.

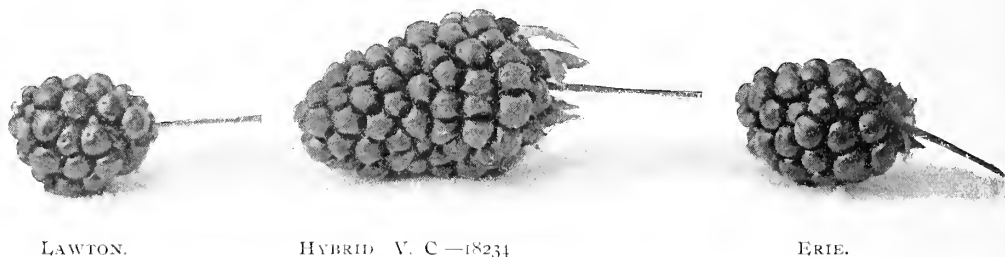
V. C.—16407.

Improved California Wild Dewberry × *Cuthbert Raspberry*.

Larger than the largest berry ever before known; bright crimson Raspberry color; productive as could be desired, and the most delicious of all berries for canning and drying.

The berries grow in clusters of five to ten or more, each, and individual berries often measure three inches around one way by four the other, and weigh one-quarter ounce each; even larger ones were weighed and measured last summer, and when exhibited provoked the question, "Will they be sold by the dozen?"

Stock on hand: One original plant. Price, \$800.



Hybrid Berry.

V. C.—18234.

This and the one just mentioned are from the same cross and the same lot of seed, and are in many respects very much alike, but this one is a stronger grower even than the other; producing annually eight or ten dark, bronzy, purple canes some twelve feet in length and one-half to one inch in diameter. The berries, the main crop of which ripens here in June (with Raspberries) are very large, dark crimson or purple color, and are covered with a shining silky coat which glistens like silver, giving the berries an extraordinary appearance; without a rival in quality for cooking, canning or drying.

Stock on hand: One original plant and fifty strong rooted tips. Price, \$800.

The accompanying cut shows comparative sizes of Lawton, V. C.—18234, and Erie.

"It is an extremely interesting scientific fact that these species should cross together as they do. It was not believed possible a few years ago, and when it was suggested that the Philadelphia Raspberry and the Wilson's Early Blackberry were natural hybrids between the two species, much doubt was thrown on such a supposition. Your experiments will be valuable as showing that such crosses are not only practicable but have actually been made. It will be, no doubt, of great interest to fruit-growers generally.

THOMAS MEEHAN & SONS, Germantown, Penn.

Hybrid Berry.

V. C.-628.

Still another unique, productive and valuable berry, produced from the same cross as the last two, but unlike them has, in addition to the color and flavor of a red Raspberry, the same form, yet the berries, which have a rich, pleasant, subacid flavor, usually separate from the stem like Blackberries. There is no berry of any name or nature grown on the face of the earth which, when dried, has the delicious high flavor that these Blackberry-Raspberry hybrids do.

Stock on hand : One large original plant, and twenty strong rooted tips. Price, \$400.

Trifoliate Dewberry.

No. 1.

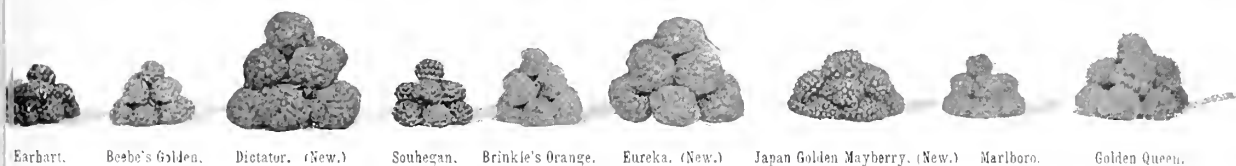
A curious, medium-sized, unusually sweet Dewberry, produced by crossing our California Dewberry and Siberian Raspberry ; very productive, and might properly be called the Clover-leaved Hybrid. The vines are long, slender and vigorous, making a growth of ten or fifteen feet ; multiplies rapidly from tips.

One large plant. Price, \$200.

Trifoliate Dewberry.

No. 2.

Similar to No. 1, and grown from the same berry, larger, but not quite as sweet as No. 1. One large bush. Price, \$200.



Photograph showing comparative size of standard old and new Berries.

New Raspberry.

“Eureka.”

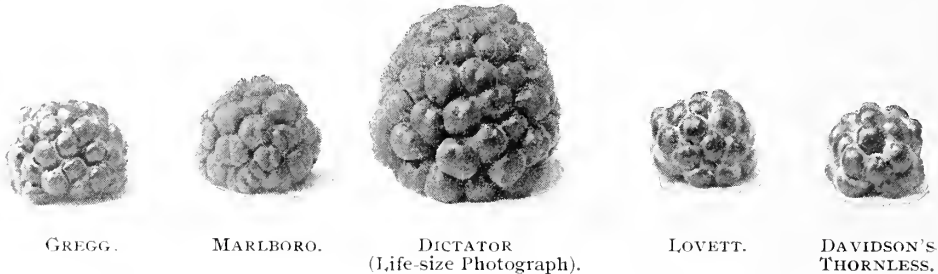
Larger than any Raspberry in cultivation ; bright red, firm, very productive, and similar to Shaffer's Colossal in its piquant acid flavor, which is very much admired by most people, especially when canned. It is nearly twice as large as Shaffer's Colossal (its great grand-parent) ; better color and

quality, firmer, handsomer, and in all respects an improvement on that well-known kind. The bushes are more compact in growth, very free from prickles, and have a sturdy, hardy appearance.

Stock on hand: One original bush (very large), twenty-eight bearing-bushes, and fifty or more suckers. Price, \$300.

"All the things we have received from you have turned out genuine, and just what you represented them. You must indeed be a benefactor in raising so many valuable fruits. Your name will be handed down to posterity."

D. HAY & SON,
Auckland, New Zealand.



Hybrid Berry.

"Dictator."

A mammoth bright red berry, which combines in itself the flavors of the Gregg and Shaffer's Colossal, from which it sprang. The combination is one of the happiest, as the acidity of one is modified by the sweetness and aroma of the other. The plant is quite a strong growing variety, resembling Shaffer's Colossal most, yet the canes are shorter. The berries average more than three times larger than Gregg and almost twice as large as Shaffer's Colossal, the largest Raspberry before known.

Stock: One original plant and a few suckers. Price, \$300.

"You have another berry that attracts my admiration; you have labeled it 'Giant.' In color the berry resembles Cuthbert Raspberry, while the foliage seems more like the Black-berry on the upper side, with the under side like the Raspberry; it also has the advantage of being nearly destitute of prickles. If this variety proves to be a good grower it certainly deserves attention."

H. E. VAN DEMAN,
Pomologist, U. S. Department of Agriculture.

Hybrid Raspberry.

S. S.—147.

This is the first practical cross of the cap and sucker Raspberries ever made, and no berry has ever been introduced which so delightfully combines the best flavors and aromas of both of these species.

All the plants from the first cross were almost or quite totally barren though vigorous beyond belief. The second generation gave many curious forms, colors, flavors, etc. The third generation, from the best of these, gave me this and the next mentioned berry. The seedlings of these improved ones are now proving to be generally fertile and productive.

Thus still another new race of berries has been added to the horticultural world.

Crossing species is but unlocking the door to the mysteries beyond, but long, tedious, careful selection produces grand results, yet few have the patience to persistently follow up Nature until she is glad to yield up some of her boundless horticultural treasures.

Stock on hand of this most delicious variety: One large original plant and several strong suckers. Price, \$400.

"I think a great deal of the work you are doing for humanity, and hope you may live to originate many more new varieties of merit."

C. W. GAMMON, Walnut Grove, Cal.

Hybrid Raspberry.

"Sugar Hybrid."

Another hybrid from one of my second generation Shaffer's Colossal Seedlings and Souhegan. It is the sweetest of all red Raspberries; Brinckle's Orange even is not to be compared with it in sweetness and aroma. The berries are quite large; about the size of Marlboro; of a dark red color, and freely produced. The vines are tall and slender and almost thornless, and are a compromise in growth between the two species.

Stock on hand: One large original plant, and four strong bearing-plants. Price, \$400.

"But every man is not a Luther Burbank, who has few superiors in horticultural matters."—*Sebastopol Times*.

Hybrid Berry.

"Paradox."

This wonderful berry appeared in the fourth generation from a cross of Crystal White Blackberry and Shaffer's Colossal Raspberry. The plant is in every respect a most perfect balance between the two species. The wood, bark, leaves, blossoms, prickles, roots, fruit and seeds cannot by any test be proven to be either one or the other.

Most of the plants from this cross are partly or wholly barren, though blooming freely, and often obtaining tree-like proportions. This one produces an abundance of oval, light red berries of good size, larger than either progenitor and of superior quality. It has been, like myriads of others on my grounds, a standing wonder to the many botanists and biologists who have seen it. (See last page of cover.)

From it, thoroughly distinct Raspberries, thoroughly distinct Blackberries, or any conceivable combination of both can be raised.

One very strong clump. Price, \$800.



OCTOBER GIANT. (Life-size Photograph.)



E.-11546. (About One-quarter Size.)

Seedling Raspberry.

"October Giant."

Seedling of Eureka, remarkable for its habit of bearing in October, as well as for its unusual size, measuring nearly four inches in circumference; bright red color; rather soft except for home use.

One plant. Price, \$200.

Hybrid Raspberry.

E.—11546.

Third generation from cross of Souhegan and Gregg. This produces most wonderful crops of fine, medium-sized red berries in October.

One plant. Price, \$200.

Hybrid Raspberry.

S. S.—8183.

Third generation from Shaffer and Souhegan; probably produces larger fruit than has ever been offered in any market. Very dark red; superior quality; vigorous and productive canes.

One strong plant. Price, \$300.

Hybrid Raspberry.

S. S.—6701.

A berry of extraordinary dimensions, growing on strong, vigorous, dark blue canes, having short blunt prickles, and with unmistakable marks of both Souhegan and Shaffer. Same cross as the last two.

One strong plant. Price, \$300.



GREGG.

S. S.—6701.

(Life-size Photograph.)

S. S.—8940.

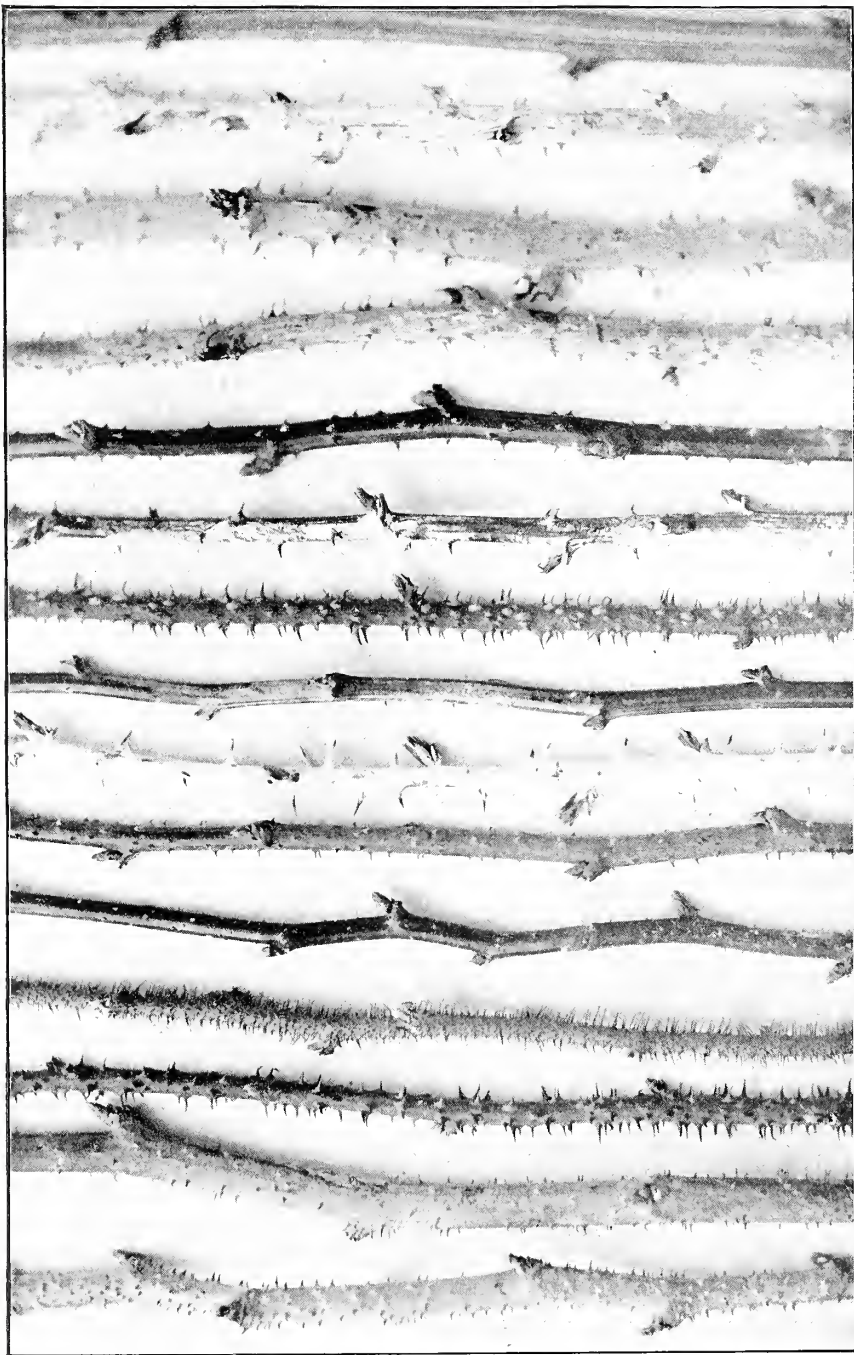
DAVIDSON'S
THORNLESS.

Hybrid Raspberry.

S. S.—8940.

This variety originated from the same lot of seed and is similar in growth and general appearance to the last. Berry more conical; firm; dark rich purple color.

One strong plant. Price, \$300.



Photograph showing sample forms of HYBRID RASPBERRIES. The colors vary from snow white, through lemon yellow, orange, scarlet, crimson, purple, light and dark blue and brown to black.

Hybrid Blackberry.

Autumn King.

Second generation from a cross of Lawton and Oregon Everbearing. A rampant grower and quite thorny, with curious, handsome, palmate foliage and pink blossoms. The berries, which ripen late in the fall, are of the largest size, and have a superior, aromatic sweet quality never found in any of the common summer varieties.

One very large plant. Price, \$300.

Davidson's Thornless Raspberry, Wachusett Blackberry and others have been introduced as "thornless" and may perhaps properly be called so, though having more or less of these troublesome marks of barbarian wildness. I have produced many new tribes of *absolutely thornless* Blackberries, Dewberries and Raspberries, all parts of the bushes being as smooth and silky as an Apple twig or the new growth on a currant bush. These once useful but now useless appendages have been completely and forever eliminated.

Table showing average weight of a number of the standard Raspberries and some of the new ones described in this list. All grown together on sandy soil without irrigation.

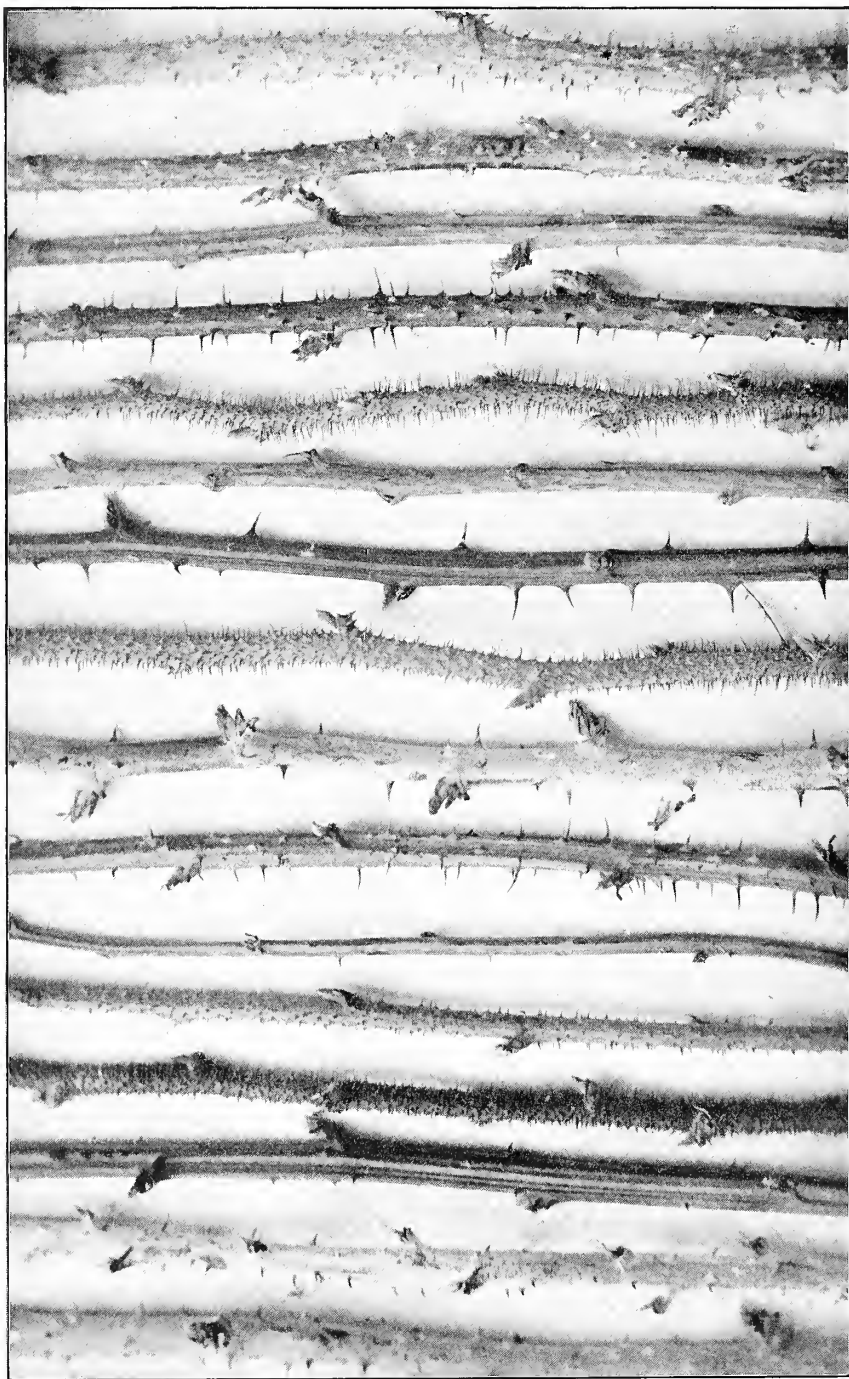
Number of berries required to weigh an ounce :

| | | | |
|--------------------------------|----|-----------------------------------|----|
| Davidson's Thornless | 35 | Beebe's Golden | 20 |
| Earhart | 34 | Wild California Blackcap. | 20 |
| Hansell | 32 | Marlboro | 18 |
| Phœnicolasius | 30 | Golden Queen | 15 |
| Cratægifolius | 28 | Japan Golden Mayberry | 15 |
| Gregg | 26 | Shaffer's Colossal. | 13 |
| Souhegan | 23 | Eureka | 9 |
| Brinckle's Orange | 20 | Dictator | 8 |

"You certainly ought to be getting some money returns for the time, labor and money you have expended in originating new fruits.

I have felt impressed with the importance of your productions being put before the public by firms of the very best reputation. Doubtless some things which have been said in their favor from this office, and more that we hope to be able to say, will be quoted; and I sincerely hope that whoever will purchase your new fruits will not say more than is strictly true. If we are misquoted they will hear from us. You may count on this division to endeavor to honestly represent to the country things just as they are.

H. E. VAN DEMAN,
Pomologist, U. S. Dept. of Agriculture.



Photograph showing sample canes of Blackberry × Raspberry hybrids all raised from seed of one plant.

Raspberry-Strawberry Hybrids.

Out of seven or eight hundred of these curious hybrids not one has ever produced a berry, though blooming with the greatest profusion; as the blossoms fade a bunch forms resembling a miniature Strawberry, but they never mature. The plants when young are practically Strawberry plants, but with age produce canes five or six feet high, multiplying by curious underground stolons. The leaves are trifoliate invariably; the canes are thornless or nearly so.

A cluster of blossoms and leaves from thirty varieties are shown in the photograph on next page.

"I have recently been to see Luther Burbank, and have examined his wonderful work at hybridizing. He has row after row of hybrids, such as ten years ago were thought impossible—five solid acres of them, after tens of thousands had been cast aside, and he is constantly rooting out the poorer ones, which the student of the flora might spend weeks over. His manipulations are so exact, that his hybrids are hybrids. Those between the Raspberry and the Strawberry are very curious. They grow about sixteen inches high, with a Strawberry leaf and bristly stems with peculiar underground stolons. They bloom but do not fruit. A true hybrid may be nearly an exact reproduction of either parent, showing no mark of hybridity whatever, yet if it fruits, seedlings of it may go all to pieces. Mr. Burbank's grandest success so far is on the *Rubus* family. What the outcome of such a vast conglomeration will be I have no idea. I think, that in view of all that has been done, it would not be very wild to say that all plants could be hybridized if one had time and skill.

"Mr. Burbank's grounds prove that Darwin was right when he said: 'It is reasonable to suppose that all life has descended from one or a few original germ or germs.'"

D. B. WEIR, in *Rural New Yorker*.

Seedling Rose.

M.—11120.

A most beautiful, light rosy crimson, ever-blooming Rose, grown from mixed seed. It has been generally pronounced "The best bedding Rose." It will always give satisfaction, as the bush grows in a compact, rounded form, and has firm glossy leaves, which are never diseased. It is always in bloom first of all, and continuing throughout the whole season is also the last to stop blooming.

Fifty large bushes. Price, \$300.

Seedling Rose.

M.—19928.

Grown also from mixed seed. Very closely resembles Papa Gontier, but is more double, and blooms much more profusely.

Fifty large bushes. Price, \$300.

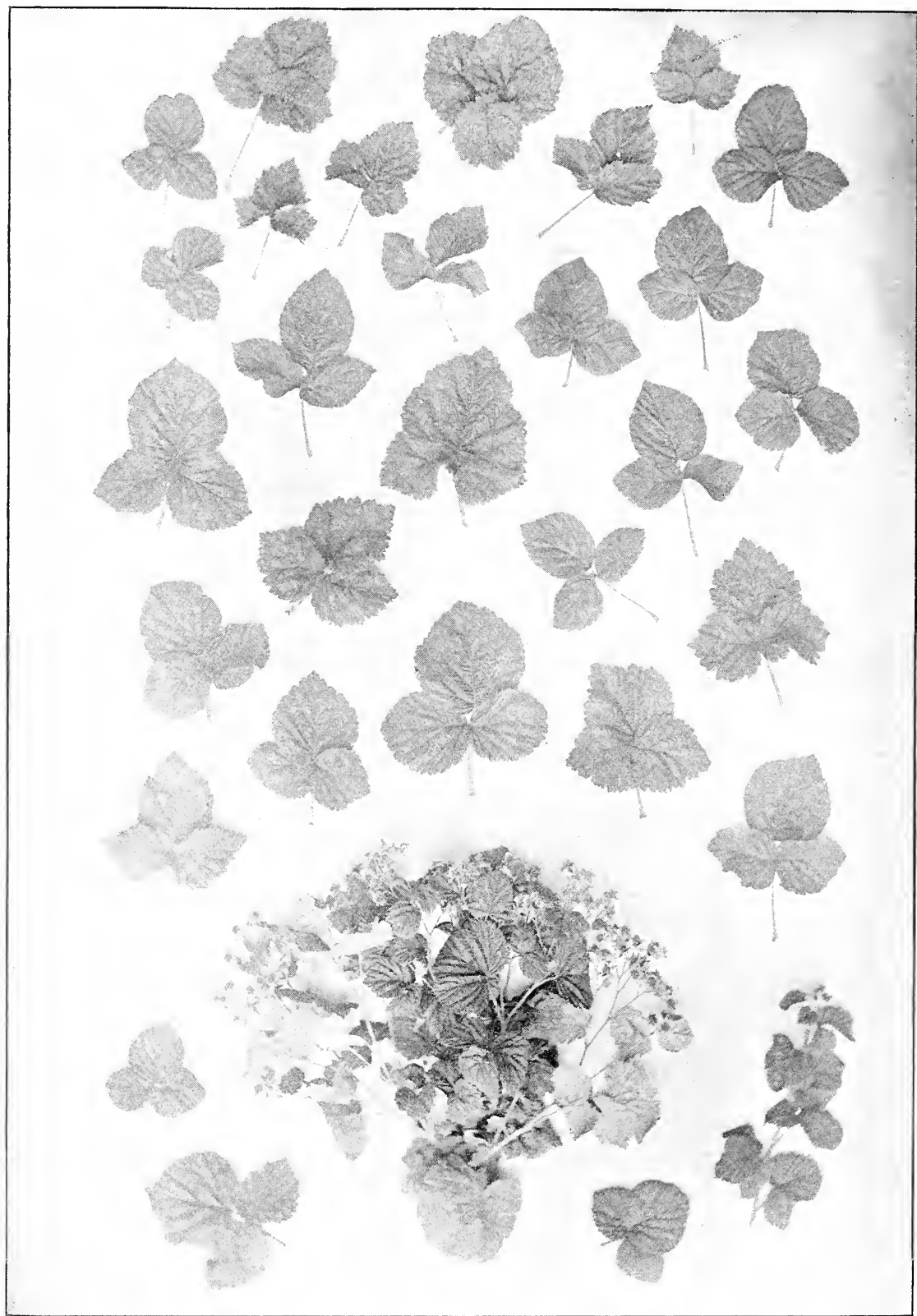
Seedling Rose.

M.—17806.

"Peachblow."

It is impossible to do this Rose justice by description, as the peculiar shading is something not before developed in Roses to the extent that it is in this one. The inside of the petals is a pale, silvery, peach pink, like *La France*; the reverse, dark, brouzy carmine pink. When the buds are opening the effect can be imagined. One of the heartiest of plants, compact growing, with large healthy foliage.

Forty large bushes. Price, \$300.





I.—26940.

Seedling Rose.

J.—26940,

A most graceful and brilliantly colored Rose, much resembling Gen. Jacqueminot, but an improvement in many respects.

Twelve plants. Price, \$300.

Seedling Rose.

H.—813.

Seedling of Hermosa and like it in its habit of blooming constantly and even more abundantly. The blossoms are of a much clearer, richer pink and stand upright instead of drooping. The bush is more compact; cuttings grow as readily as coleus, and often bloom when only two inches high.

Sixty large bushes. Price, \$150.

"Santa Rosa has one of the largest experiment stations in the world. The patient and expensive scientific work which is being carried on at this establishment in the production, or, more correctly, the creation, of new fruits and flowers is destined to make our city widely known to the horticultural world, as nothing of the sort has ever before been undertaken on so large a scale by any single individual.

"In the creation of new plants Mr. Burbank has been surprisingly successful; several of them are now extensively grown throughout the civilized world. By a glance at his order-books we learn that his new productions have brought him orders this winter from many far-away places, among which we noticed New Zealand, England, The Netherlands, France, Italy, Prussia, Canada, Guatemala, Mexico, Chile, Sandwich Islands, British Columbia, Japan, and all parts of the United States."—*Santa Rosa Democrat*.

Rugosa Hybrids, etc.

Besides the Roses before described, a climbing pink Rose is attracting attention. It received a medal from the California State Floral Society. Also some extra fine large double Rugosa Hybrids from Rugosa X Gen. Jacqueminot, Rugosa X La France, Rugosa X Paul Neyron, Rugosa X Banksia, Rugosa X Sinica and other crosses. These, though lacking in the lasting qualities of most roses, are, in brilliancy of color, unexcelled.

Prices on application.

"BURBANK'S EXPERIMENT GROUNDS.—This name conveys little idea of the important character of a unique industry which is being prosecuted by Luther Burbank, an enthusiastic believer in the Darwinian theory of evolution, and a successful horticulturist. His grounds are producing some remarkable results in successful combinations of plants, trees, vegetables, flowers and fruits. The work requires great care, time, patience and skill such as few men possess. Nothing like Mr. Burbank's experiments on so large a scale has ever been attempted before. Most of the *Daily Report* readers are familiar with Mr. Burbank's name and work; and, though he takes great pleasure in entertaining visitors, and explaining to them what changes and improvements he is making in plant creation, his work is such as to preclude the possibility of admitting the public, and requires to be entirely free from interruption. Some of the new plants and flowers will soon be ready for introduction."—*San Francisco Daily Report*.

A New Calla.

Variegated Little Gem.

The Little Gem Calla has made itself a favorite everywhere by its dwarf, compact habit of growth and profusion of flowers. In a field of them, which I had growing last summer, one plant produced beautiful golden-marbled leaves. It was removed and divided, and there are now eight strong plants in existence, all variegated, with irregular golden marblings; even the flower-stalks are striped and marbled green and gold. The blossoms are whiter than those of the plain Little Gem, are produced as freely, and the plants are as vigorous and increase as rapidly.

Stock on hand: One large old plant, with numerous bulblets and offsets, and seven strong young plants. Price, \$1,000.

New Calla.

"Snowflake."

Among the eighteen thousand seedlings of Little Gem Calla which I have growing one has appeared which is a gem among little gems. It never grows half as large as Elliott's Little Gem, and produces in profusion tiny, snow-white, gracefully molded flowers. The new variety is as hearty, blooms as freely, and multiplies as rapidly as any of the Callas, and will become indispensable to every florist and lover of flowers. Price, \$2,000.

Giant Calla.

This grows four or five feet high on common soil, producing handsome mammoth leaves and snow-white flowers almost large enough for a hat.

Fifteen strong plants. Price, \$200.

"One of the most experienced, practical and scientific propagators in the world."

—*Orchard and Farm.*

New Calla.

Golden Variegated Richardia albo maculata.

There is hardly a plant in general cultivation which has more pleasing variegated foliage than the spotted leaved Calla. The wholesale demand for the bulbs which have been raised from seed on my grounds has been enormous. Among hundreds of thousands thus raised one has been secured with the usual white spots and also *handsome, golden variegated leaves*; both the white spots and the golden variegations on each leaf. The plants, though not growing as tall, have as large leaves, are as vigorous, and multiply as rapidly as the common kind; as handsome as some of the fancy leaved Caladiums, and as easily grown as potatoes.

Five plants. Price, \$1,500.

"The day spent at your place and the inspection of your myriad interesting experiments in horticulture was one of the most valuable of my whole summer's trip. A visit at your place was one of the things which I had hoped would fall to my lot, but at the same time it came sooner than I had expected or hoped. My interest will continue to be very deep in your experiments."

C. L. HOPKINS, Assistant Pomologist, U. S. Dept. of Agriculture.

Hybrid Lilies.

No class of hardy plants can claim so many captivating charms for all as Lilies. Their stately growth, large, graceful, richly colored or pure white flowers, the exquisite fragrance of some varieties, and their ease of culture render them the most generally admired of all bulbous or tuberous flowering plants; and there is no lack of choice varieties for the hybridist to work upon, as the species are very numerous and their characteristics well defined; but numberless most subtle influences vary the results of the hybridization of Lilies so that they have been generally neglected as incorrigible.

The uncertain and unsatisfactory results of hybridization combined with the great amount of care and patience and the length of time required to produce new varieties has, with a few notable exceptions, discouraged experiments with the Lilies, otherwise the most promising of all plants for such study and combination; yet the production of new forms depends on this important point.

Sixteen years ago I commenced experimenting in crossing our native Pacific Coast Lilies, adding, from time to time, all the exotic species and varieties which seemed to promise favorable results, until my collection was the most extensive in the western half of America; these have been combined and selected, and recombined and reselected, until the most important results ever achieved among Lilies are now an embodied fact.

Can my thoughts be imagined, after so many years of patient care and labor, as, walking among them on a dewy morning, I look upon these new forms of beauty, on which other eyes have never gazed? Here a plant six feet high with yellow flowers, beside it one only six inches high with dark-red flowers, and further on, one of pale straw, or snowy white, or with curious dots and shadings; some deliciously fragrant, others faintly so; some with upright, others with nodding flowers; some with dark-green, woolly leaves in whorls, or with polished, light-green, lance-like, scattered leaves.

As the fresh, dew-laden petals of these new creations, which had never been spread out to the light of day, were unrolled before me a new world of beauty seemed to have been found and a full recompense for all the care bestowed upon them.

The bulbs are a study, and had not some of them been in value ten times greater than their weight in refined gold, photographs would have been obtained to show their peculiar forms.

Of some of the older hybrids and seedlings I have as many as a thousand bulbs each. All these are for sale, as I have half a million kinds yet to unfold their petals for the first time, and am still planting from *one to three pounds of hybridized Lily seed every season.*

A list of some of the Lilies combined in these hybrid seedlings is given below:

| | |
|--------------------------|-----------------------------|
| Auratum, many varieties; | Longiflorum; |
| Batemanniae; | “ eximium; |
| Browni; | Leitchlini; |
| Bloomerianum; | Martagon, varieties; |
| “ ocellatum; | Maritimum; |
| Bulbiferum; | Pardalinum, many varieties; |
| Cordifolium; | Parryi, varieties; |
| Candidum, varieties; | Parvum, varieties; |
| Callosum; | Philadelphicum; |
| Canadense, varieties; | Speciosum, varieties; |
| Columbianum; | Superbum; |
| Carniocrinum; | Sarana; |
| Catesbaei; | Takesima; |
| Chalcedonicum; | Tigrinum, varieties; |
| Elegans, many varieties; | Tenuifolium; |
| Giganteum; | Unbellatum, varieties; |
| Grayi; | Wallacei; |
| Hansoni; | Wallichianum; |
| Humboldti; | “ superbum; |
| Japonicum; | Washingtonianum; |
| Krameri; | “ purpureum. |

Among the Lilies which have increased so that a good stock can be offered I mention two.

P.—2854.

A very handsome, large flowering *L. pardalinum*, growing two feet high, with short, broad, glossy leaves in whorls. It multiplies rapidly and is the finest of the pure bred *Pardalins*.

Stock on hand: Five hundred large bulbs. Price, \$300.

P.—72721.

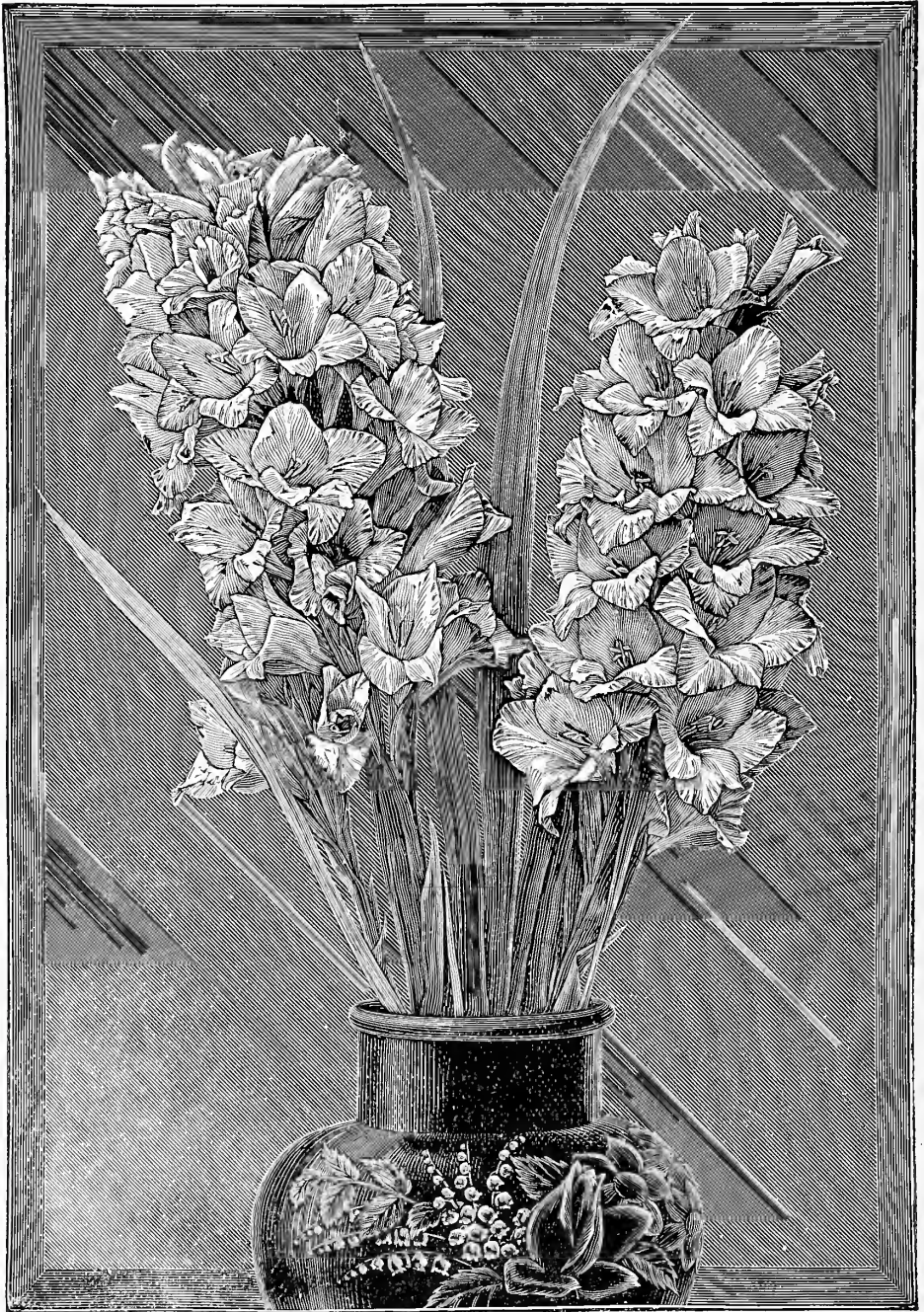
In Pluton Creek, near the Geysers, in 1876, a dwarf wild *L. pardalinum* was found. From this many curious seedling forms have developed by constant selection since; the most remarkable being a variety *growing only ten inches high* and producing from *twenty to forty blossoms on each of these short stalks* (the usual number for the species being from three to eight). The effect produced by this crown of flowers set on the tuft of dark-green leaves is very pleasing and not to be found elsewhere among Lilies. This variety is as easily grown as Potatoes.

Stock on hand: One thousand large bulbs. Price, \$500.

"You are certainly entitled to the credit claimed by some of our favorite Eastern florists, of doing 'better than we promise.'"

HENRY NEWMAN, San Francisco, Cal.



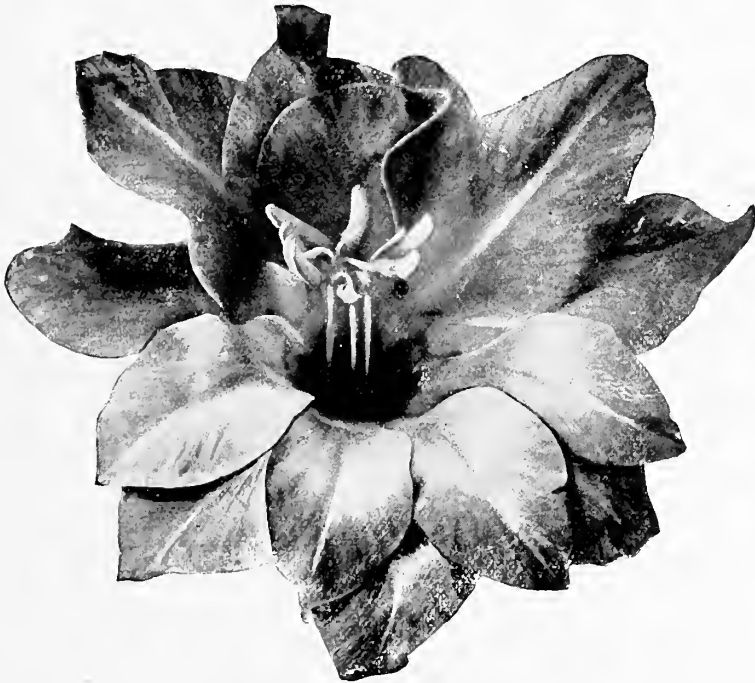


CALIFORNIA.

Gladiolus

Four years ago six of the best from among a million or more seedling gladioli, which I had been raising during the ten years preceding, were named and introduced, but the demand for seed and bulbs has been so great, and so constant, that I have never been able to raise them fast enough to supply hundreds where thousands were wanted.

One, a beautiful double variety (California) is the *first double Gladiolus* and the *first of a type* in which the flowers are closely arranged all around the spike, like a Hyacinth, adding a new charm to one of the handsomest flowers in cultivation. From "California" more double ones have been obtained, and with flowers of even better lasting qualities, and of various shades, all having the remarkably thick, lasting petals which have quickly made the "California strain" so popular; in the new strain the first flower remains fresh to say good morning to the very last one to bloom, even though the sun may be doing its best; none of the older varieties can stand such a test.



The new gladioli must be seen, as all descriptions of such a variable flower must necessarily be unsatisfactory. A few especially fine ones are mentioned among the *crème de la crème*.

- No. 4. *White*; very large flower.
- No. 5. Dwarf, *double*, cherry striped white.
- No. 6. Dwarf, *double*, cherry striped crimson.
- No. 8. *Best* and clearest *yellow* Gladiolus in existence.
- No. 12. Very peculiar dots and markings on light crimson ground.
- No. 22. Crimson, white striped.
- No. 26. Clear *yellow*.
- No. 57. Dwarf, *double* scarlet.
- No. 62. Dwarf, *double*, pink.
- No. 63. *Double*, striped crimson and white.

"Mr. Burbank has devoted a life's work to the growing of new things, and has had wonderful success in gaining hybrids between distinct species of hundreds of fruits and flowers, many of them between species that ten years ago a man would have been considered 'a dead gone crank' if he had intimated that such hybrids could be obtained.

"He has to-day growing, with many of them in fruit, hybrids between nearly all the different species of the Almond family, between nearly all the species of the Blackberries and Raspberries, and between the different members of each, and also the Dewberries. Some of these are not only exceeding curious, but of wonderful vigor, productiveness, size and quality of fruit. I would say that his best Dewberries and Raspberries exceed all the older varieties at least four times in productiveness, and are all that could be asked for in size and quality of fruit. These are only examples of what he has been doing. Nearly every known fruit and flower that can be made to grow 'in this California climate' has been manipulated, species ripped up, broken up and 'taken through a course of sprouts,' until a botanist who should view the 'remains' could hardly find a whole plank large enough to place his feet on.

"As one example of his work, he has grown from the choicest seed, selected from every species and strain, over 100,000 roses; from these he selected with the utmost care 25,000 and flowered them, and I saw them in bloom at three different times this season. And though I am no florist I know that there were some 'good ones' among them, and that the square acre of new seedling roses all in bloom was a goodly sight.

"The gladioli were early a favorite flower on this coast; but the old varieties all had two serious faults. In our richest of rich soils the stems grew too tall (here we have a gentle, sometimes increasing to a strong steady wind nearly constantly in summer, generally from one point of the compass, which was hard on these tall slender stems), and the flowers were scattered too much on the stems, also they were not large enough and not enough of them in bloom at one time. Mr. Burbank set himself to the task of remedying all these defects, with one other very prominent one here under our bright skies; namely, the flowers of the old strains did not well withstand this bright sun and drying wind. Well, he grew thousands and thousands of seedlings, crossed and recrossed the varieties, with the result that every defect has been eliminated, and he has a new creation, embodying in perfection every point sought for and more. He has doubles of the largest size, perfect in color and markings. He has strains of nearly all colors of the largest of flowers, so closely ranked that the flowers seem to be ranked in four rows on the stem, and, best of all, flowers to the tips of the canes, so close together as to give the extremity of the flower stem a perfect solid cone of flowers, the petals entirely hiding the stem on all sides. The individual flowers are simply immense in size, we found numerous ones of many varieties five and one-half inches from tip to tip of petals, with colors of every kind and markings known to the species. As to the size of the flowers I will say I visited many gardens in Santa Rosa and Petaluma which had in bloom, I may say, nearly all of the older choice varieties, and the largest flower found was four and a quarter inches across the petals, the average being about two and a half inches, and then having all the care that rich soil, culture and water that could be given them, while the Burbank seedlings were growing in crowded rows on light sandy soil and no irrigation.

"Mr. Falconer speaks of 'grand flowers with stems five and six feet tall,' Mr. Burbank bred for an ideal plant with a stiff short stem able to support itself in a windy country with stems two and a half to three feet and a half high, and he got it. Again the finer old sorts were too ephemeral, would not withstand the sun with their thin petals. Mr. Burbank bred for thick fleshy porcelain petals that would withstand bright sun and buffeting breezes, and he got them.

"And so it seems to be nearly all the way through. He has developed nearly everything he has tried for. He has thousands of new things, some of them truly wonders, as an example has 10,000 new varieties of Potatoes selected from tens of thousands of seedlings. I will close by saying, please do not burden Mr. Burbank with inquiries. He is a very busy man, and has nothing for sale except such things as he advertises each autumn in his list of novelties."—D. B. WIER, in *American Florist*.

"A serious defect of some otherwise very good varieties of the Gladiolus is lack of substance in the petals, unfitting them to endure the sunshine long without wilting. This is a fault of many of the beautiful sorts sent out by Messrs. Kelway of Somerset, England. Special efforts have been made to overcome this imperfection by growers in various parts of the United States, the most successful of whom is Mr. Burbank, already referred to, who seems to have obtained a new strain suited to the warm, dry climate of California. Among his choice varieties is 'California,' the nearest approach to a double Gladiolus yet obtained, bearing its flowers all around the spike like a Hyacinth."—J. R. BLACK, in *New York Examiner*.

"I am sorry to say that these California Gladioli, of which I had formed such high expectations, are not what we consider very good flowers in the vicinity of Boston; none of

them withstand the sun better than our ordinary kinds ; none of them have flowers above the ordinary size ; none of the flowers have colors or shadings which would cause particular notice."—W. E. ENDICOTT, in *Popular Gardening*.

"Last November I was attracted to your Gladiolus by an article by W. E. Endicott in *Popular Gardening*. I ordered some from an Eastern seedsman, and planted them early to try them in the hot sun. To-day has been ninety-five degrees in the shade, and yet each flower is fresh and good. I have some four hundred varieties all named, and will say that yours are all you claim for them. 'Santa Rosa' stands the sun the best of any Gladiolus I ever saw, and I have grown Gladiolus for fifteen years. If you get out anything better than these let me know, as I shall want them. I am well pleased with my investment. May all your efforts be crowned with success."

T. S. MOORE, Terre Haute, Ind.

"The Gladiolus Bulbs you sent me last year (California strain) were very fine, and they certainly endure our hot sun better than most of ours. They also keep longer in water."

M. CRAWFORD, Cuyahoga Falls, O.

"For the past sixteen years I have been purchasing the best-named Gladiolus gandavensis as sent out from year to year, for which I have paid large sums of money, but shall not buy any more in the East, as from a small lot of your *second-class* mixed seedlings I obtained more really grand first-class flowers—and among them a purer white than I had ever seen before. The colors and shadings are brilliant in the extreme, and they stand the sun wonderfully, the first flower remaining fresh for many days until the last one is open, while the Eastern varieties often fade before noon."

J. P. STANLEY, Santa Rosa, Cal.

"The Gladiolus you sent me were the finest among several hundred that I had growing last season."

SETH WINDQUIST, Russellville, Oregon.

"Our Gandavensis and Lemoinei varieties have at one time usually five blossoms, and as they drop more follow. We notice in yours that the full stem blooms at one time."

J. W. ADAMS (Nurseries), Springfield, Mass.

"I am much pleased with your Gladiolus."

T. S. MOORE, Terre Haute, Ind.

Hybrid Clematis.

No hardy flower except the Rose and the Lily is so magnificently beautiful as the new Hybrid Clematis ; seedlings of which have been grown at the rate of ten thousand a year for several years, and some of the best ones in existence secured. Some of these are mentioned below :

1. A double variety, with broad snow-white sepals ; flowers, five to six inches in diameter ; in bloom almost constantly throughout spring, summer and fall.

2. Another double white seedling ; the flowers resemble those of the White Water Lily ; grows freely and blooms abundantly.

3. A double light sky-blue seedling or Jackmanni ; a perfect rosette of hundreds of gracefully arranged narrow sepals.

4. A double dark purple hybrid seedling ; very large flowers.

5. A seedling of Clematis Coloradensis the branches and leaves of which are pale green ; the large clusters of white flowers are followed by the ornamental feathery carpels which are, by their unusual light color, very conspicuous.

6. Handsome seedlings produced by crossing Clematis crispa, C. coccinea and others. Prices on application.

New Myrtle.

The most attractive shrub and one which everybody admires for the beauty of its foliage and flowers, and its spicy fragrance, is a new silver variegated Roman Myrtle or "Bride's Myrtle (*Myrtus communis*) which originated on my grounds in 1882 from seed of the common green-leaved variety.

The original plant and all the cuttings which have been grown from it have maintained their beautiful variegation and compact growth without any tendency to change. There is an old variety which grows upright with straggling branches, the leaves of which have a dull unattractive appearance.

The new one grows compact, with drooping branches, graceful in every outline; each leaf has a broad border of snowy white, with only a narrow line of green in the center, and growing readily from cuttings; it is, without doubt, the *best* variegated shrub for outdoor planting where it is hardy, and one of the best for florists' use and home culture.

Stock: Three hundred large plants and about 500 small ones, from both of which 20,000 cuttings can be made next fall. Price, \$400.

"Nothing could be more elegant, pleasing and satisfactory. The handsomest variegated shrub I have ever seen."

DAVID MELDRUM, California State Gardener (once with Robert Buist).

New Poppy.

"Silver Lining."

By six years' selection from a sport of *Papaver umbrosum* (Butterfly Poppy) I have succeeded in producing a variety, now nearly or quite fixed, which instead of being crimson and black on the inside of each petal is a glistening silvery white; the outside remains the same brilliant crimson, producing an effect which is strikingly beautiful.

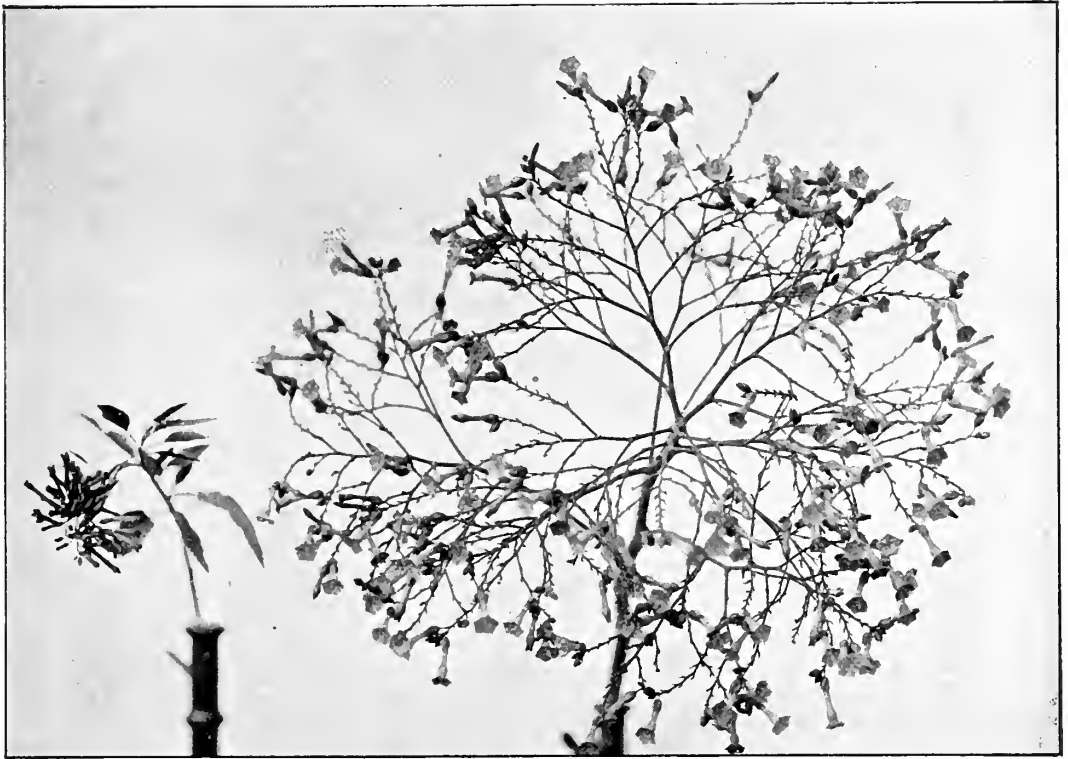
A New Plant.

The Nicotunia.

This is the first time this word was ever printed, and the plant is one which has never before been seen; some botanist asks, "What is it?" It is the name which I have given to a new race of plants produced by crossing the large flowering *Nicotianas* with the *Petunias*. If one thinks he can take right hold and produce *Nicotunias* as he would hybrid *Petunias* or cross-bred *Primroses*, let him try; there is no patent on their manufacture; but if the five hundredth crossing succeeds, or even the five thousandth, under the best conditions obtainable, he will surely be very successful; I do not fear any immediate competition.

The plants have slender, drooping or trailing tomentose green, red and purple stalks and leaves twice or three times as large as the *Petunia*; the flowers are handsome, white, pink, carmine or striped and borne in bounteous profusion. No seed is ever produced, but they are very readily multiplied by cuttings.

"Burbank, the wizard of horticulture."—SAM'L WATSON, in *Orchard and Farm*.



NICOTIANA GLAUCA.

HYBRID NICOTIANA WIGANDOIDES RUBRA \times N. GLAUCA.

Hybrid Nicotianas.

After several years I have at last succeeded in crosssing *Nicotiana alata*, *N. glauca*, *N. purpurea*, *N. suaveolens*, *N. affinis*, *N. colossea* and others. Many of the new hybrid varieties were only obtained after several thousand crossings, under all conditions which seemed to promise success; but now I have *perennial varieties* with glaucous green foliage, edged, marbled and mottled with white, bearing pink flowers in cymes often two or three feet across, with from 500 to 2,000 or more blossoms in each cyme. These plants grow from five to eight feet high.

Another strain of these hybrids grows more like *N. affinis*, with crimson and white striped flowers in abundance; ever-blooming. (See cut, page 2.)

Another strain grows in the form of a branching tree, with pale, greenish-yellow, tubular flowers in panicles in such profusion that the upper part of the plant appears to be all flowers. Most of these hybrids are readily propagated from root cuttings or slips; none of them ever bear any seed; all are unusually hardy.

Begonia-leaved Squash.

A mammoth Squash which produces abundant crops for stock-feeding, and has bright golden variegated leaves. The unusual leaf variegation appeared four years ago on a single vine, and by selection has become so fixed that at least ninety-five per cent are variegated. The form, size and uniform appearance of the Squashes has also been greatly improved.

"It gives me great pleasure to deal with one whom I know so well through the horticultural press, and whose work I so much esteem."

W. B. CLEVES, Binghamton, N. Y.

New Potatoes.

These are the best of several thousand seedlings, and have been tested for five years.

1. A long, nearly cylindrical, smooth, white seedling of the Burbank; the eyes are hardly perceptible, and the flesh has the sweet, rich, Potato flavor which the Early Rose had in its best days. The Potatoes, which are produced abundantly, often grow eight or ten inches in length.

2. A short, flatish, oval, light-colored Potato with a russet coat, from a cross of the old "Chili" or "Bodega Red" and the Burbank.

Both are superior keepers, and have never shown any tendency to become diseased.

"Dr. Eisen, of the California Academy of Sciences, remarked that in the Eastern States and Europe, where he has lately been collecting material for a new book, the name of Luther Burbank was familiar to scientists everywhere, and that unusual interest was manifested in his work."—*Santa Rosa Democrat*.

"Your system of packing is undoubtedly perfect. We have always considered you perfectly reliable."

STEUBENRAUCH BROS., Mexia, Texas.

Ornamental Cross-bred Tomatoes.

By crossing the Little Currant and the Dwarf Champion Tomatoes some unusually handsome ornamental varieties were produced. The photograph on the first page of cover shows some of the fruit and one of the leaves.



New Tomato.

“Combination.”

This distinct novelty in ornamental fruiting plants grows about twelve inches high by fifteen inches across. The curious, plaited, twisted and blistered but handsome leaves, sturdy compact growth and odd clusters of fruit will make it a favorite ornamental plant which can be easily grown by everybody.

“Luther Burbank has established a world-wide reputation for the excellence of his products.”—*Santa Rosa Republican*.

Other New Plants.

A seedling *Ampelopsis Veitchi* may be mentioned which has dark-red leaves throughout most of the season, turning very dark in the fall.

A Wax Myrtle (*Myrica cerifera*) which produces a surprising amount of berries which grow in great clusters or balls, are easily gathered, and have an unusually thick coat of wax.

Some charming, cross-bred, seedling *Tigridas*, New Cannas, Arums, *Amyrillis*, *Brodiaes*, *Aquilegias*, Asters and a multitude of other things not yet near enough to perfection to merit a special description; yet some of the hybrids which I have obtained are worthy of much study. Among which I will mention:

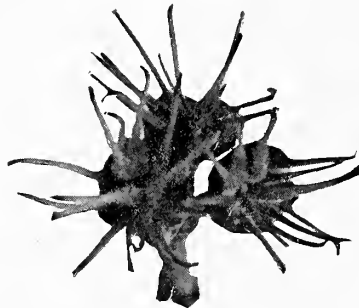
Peach X Almond,
Peach X Japan Plum,
Peach X Chickasaw Plum,
Peach X Apricot,
Almond X Peach,
Almond X Japan Plum,
Apricot X Japan Plum,
Pyrus Japonica X Quince,
Chinese Quince X Common Quince,
Quince X Crab Apple,
Japan Quince X Apple,
Potato X Tomato, etc., and hundreds of others, which will be mentioned later.

Chickasaw X Japan Plum,
Apricot X Peach,
Japan Plum X Peach,
Japan Plum X Chickasaw,
Myrobolan X Japan Plum,
Domestic X Wild Goose Plum,
Crab X Common Apple,
Pyrus Japonica X Chinese Quince,
Quince X Apple,
Chinese Quince X Apple,
Crab X Common Apple,

Not only one of each of these is growing, but many, in some cases several hundred each, and, of some, thousands.



APETALOUS PISTILLATE BLOSSOMS OF PLUM X APRICOT HYBRID.



SAME. (Life Size.)

"Our interest in your work and the new things you have produced is in no way decreased."
H. E. VAN DEMAN, Pomologist, U. S. Dept. of Agriculture.

"Careful and conscientious and devoted to his calling, in which he is a master, he works and deals in a thorough manner, and merits the good name and increasing business which the people award to him. An hour in his grounds is an hour delightfully passed."—*Santa Rosa Republican*.

Facts and Possibilities.

There is no possible room for doubt that every form of plant life existing on the earth is now being and has always been modified, more or less, by its surroundings, and often rapidly and permanently changed, never to return to the same form. When man takes advantage of these facts, and changes all the conditions, giving abundance of room for expansion and growth, extra cultivation and a superabundance of the various chemical elements in the most assimilable form, with abundance of light and heat, great changes sooner or later occur according to the susceptibility of the subject; and when added to all these combined governing forces we employ the other potent forces of combination and selection of the best combinations, the power to improve our useful and ornamental plants is limitless. But in crossing, as in budding or grafting, the affinities can only be demonstrated by actual test, which often involves long, tedious, and expensive experimenting.

In budding or grafting, the nurseryman finds every conceivable stage of congeniality between stock and bud or graft, from actual poisoning to a refusal to unite; or uniting and not growing; or growing for a short time and dying; or separating where united; or bearing one or two crops of fruit and then suddenly blighting; or separating after years of growth up to complete congeniality. So in crossing, all grades of hybridity are to be found. Crossed plants generally have the characteristics of both parents combined, yet, owing to prepotency of the life-forces in certain directions or congeniality of surroundings sometimes show only their parentage on one side producing uncertain results in the first generation, and these cross-bred seedlings often break away into endless forms and combinations, sometimes even reverting to some strange ancestral form which existed in the dim past; or the break may not occur until after many generations, but when once the old persistent type is broken up the road is open for improvement and advance in any useful direction. Sometimes hybridized or crossed seedlings show considerable or even great variations for weeks and then change at once to one or the other of the original types; or they may show no change in foliage or growth from one or the other parent forms until nearly ready to bloom or bear fruit, when they suddenly change in foliage, growth, character and general appearance.

Tomatoes may be grown from seed pollinated from Potato pollen only, and Juglans regia from nuts pollinated only from Juglans cinerea or J. nigra. The common Calla has often been grown from seeds pollinated only by Calla albo-maculata; also pure Wheat from Rye pollinations, and *vice versa*; pure Blackberries, Raspberries and Dewberries from Apple, Rose, Quince or Mountain Ash pollinations.

Seedling Lilies very rarely show the effect of foreign pollination, though often producing seed much more abundantly than with pollen of the same species.

These facts have been observed by me so often, and have been worked on so extensively, and can be proven so readily, that the common theory of parthenogenesis must, in these cases, be set aside.

There is no barrier to obtaining fruits of any size, form or flavor desired, and none to producing plants and flowers of any form, color or fragrance; all that is needed is a knowledge to guide our efforts in the right direction, undeviating patience and cultivated eyes to detect variations of value.

The descriptions in this list are necessarily short and incomplete, but in all cases exaggeration has been studiously avoided.

It is fair to suppose that one who has had extensive experience in any special line should be able to give judgment approximating impartiality. All

the new plants mentioned in this list and the supplementary lists which are to follow will have to be judged by the great discriminating public, and will infallibly stand or fall by its verdict, without regard to what the originator or introducer may see fit to say.



Photograph Showing BURBANK Potatoes grown on "PONDEROSA" Tomato Plant.
(See cut page 1, showing result of *vice-versa* grafting.)

Botanic Gardens for California.

"The *Pacific Rural Press* states that J. B. Armstrong, of Santa Rosa, has donated, in trust, 640 acres for the preservation of the redwood timber land in Sonoma County, and the construction of a botanic garden. The trustees are his daughter, Miss Kate Armstrong; E. J. Wickson, of the *Rural Press*; Charles Howard Shinn, the bright and intelligent horticultural writer; Luther Burbank, the great experimenter, in hybridization; and Robert Underwood Johnson, of the *Century Magazine*. They have accepted the trust. The tract is on the north bank of the Russian River.

Col. Armstrong, now far advanced in years, has carefully preserved this forest; not a log of redwood timber has been cut from it since it came into his possession. All that will be done, at present, is to look after the preservation of the redwoods, but the work of the garden will be gone on gradually. It is believed that the garden can be made self-supporting. Although it has no endowment at present, it is said to be worth \$150,000. Col. Armstrong is an Ohio man. He has been for several years the owner and editor of the *Santa Rosa Republican*.—*Meehan's Monthly*.

What Science Has Done in Agriculture.

Not only has intensive cultivation taught us how to draw a larger return than formerly from a particular soil and a given surface, but by the selection of seeds we have doubled and tripled the formation of sugar in beet roots; by like selections, the production of the Potato has been augmented, and we are seeking, with certainty of success, yet more considerable increase in the production of Wheat. No less progress is reached in the production of fruits and vegetables and of cattle, to the daily amelioration of the general condition of the human race.

This advance has been promoted partly by close acquaintance with the general laws of living nature as revealed by disinterested science—laws which are the essential foundation of every application, and equally and in a way no less worthy of admiration by the efforts of inventors, those men of practical ingenuity, who labor at the same time for the increase of their own fortunes and for the good and profit of mankind.

P. E. M. BERTHELOT, in *Popular Science Monthly*.